

Lynn University

SPIRAL

Student Theses, Dissertations, Portfolios and
Projects

Theses and Dissertations Collections

2007

Effectiveness of Instructional Strategies Emphasizing Cooperative Learning in the Acquisition of English by Taiwanese University Students

Mei-Ling Chen
Lynn University

Follow this and additional works at: <https://spiral.lynn.edu/etds>

Recommended Citation

Chen, Mei-Ling, "Effectiveness of Instructional Strategies Emphasizing Cooperative Learning in the Acquisition of English by Taiwanese University Students" (2007). *Student Theses, Dissertations, Portfolios and Projects*. 38.

<https://spiral.lynn.edu/etds/38>

This Dissertation is brought to you for free and open access by the Theses and Dissertations Collections at SPIRAL. It has been accepted for inclusion in Student Theses, Dissertations, Portfolios and Projects by an authorized administrator of SPIRAL. For more information, please contact liadarola@lynn.edu.

**EFFECTIVENESS OF INSTRUCTIONAL STRATEGIES EMPHASIZING
COOPERATIVE LEARNING IN THE ACQUISITION OF ENGLISH BY
TAIWANESE UNIVERSITY STUDENTS**

DISSERTATION

Presented in Partial Fulfillment of the Requirements for the Degree of

Doctor of Philosophy

Lynn University

By

Mei-Ling Chen

2007

**LYNN UNIVERSITY
LIBRARY**

Order Number: _____

**EFFECTIVENESS OF INSTRUCTIONAL STRATEGIES EMPHASIZING
COOPERATIVE LEARNING IN THE ACQUISITION OF ENGLISH BY
TAIWANESE UNIVERSITY STUDENTS**

Mei-Ling Chen, Ph.D.

Lynn University, 2007

Copyright 2007, by Mei-Ling Chen All Rights Reserved

U.M.I.
300 N. Zeeb Road
Ann Arbor, MI 48106

ACKNOWLEDGMENTS

The road to completing a dissertation can be filled with hardships and challenges. However, I finally conquered the difficulties of dissertation writing. The dissertation pathway is long-term journey, but a rewarding experience. There are many people who have supported and encouraged me throughout the entire doctoral process. Without their concern, encouragement, and assistance, I would not have been able to accomplish this dissertation. I would like to take this opportunity to express my deepest gratitude to them.

First of all, I would like to give my special thanks to my dissertation committee Chair Dr. William Leary, for his kind, patient, and proficient guidance while completing my dissertation. I sincerely appreciate his instruction, support, concern, and continuous encouragement throughout the whole period of study. Working with Dr. Leary gave me a deeper understanding of how to be a more effective educator. I am also thankful to my prominent dissertation committee members Dr. Cheryl Serrano and Dr. Adam Kosnitzky for their support, assistance, and insightful comments. They provided professional instruction that helped me improve my research paper and moved me in the right direction. I also want to express my sincere appreciation to our Coordinator, Dr. Joan Scialli. She was full of enthusiasm and offered her time. She made the whole research process move more smoothly. In addition, she also instructed me on strategies for conducting a research study and constructing a research proposal.

My warmest appreciation goes to my entire fantastic family, including my parents, who were continuously concerned about my dissertation process, and my sister and brother, who were concerned about my family life. I especially would like to thank my mother for giving me financial support and encouraging me to pursue a higher level of

education. She is a good listener and always supported me during the hardships of this academic journey. Thanks to everyone's support and concern, I completed the doctorate degree without worries. I also want to thanks my husband, who took good care of our children and gave me great spiritual support. We have shared very exciting moments while raising our family. Your selfless love, best regards, and encouragement always gave me the strength and determination to accept all new challenges. I feel so lucky to have you as my love and with me to create our family to make life even more colorful and delightful. I am so happy to be sharing my student life with you. In addition, I also would like to thank my son Patrick and my daughter Angelina, who always gave me a smile, love, and big hugs. Raising you and hearing your warm words have brought me greater confidence and willpower during the completion of my dissertation. Hence, I want to dedicate this dissertation to my mother and give the greatest honor to both my families.

Finally, I would like to give sincere to thanks my friends, including Abby Chou, Kenny Chiang, Jacky Chih, Steve Chen, Monica Hsu, Vita Lin, and Jane Chou, whose kind friendship and encouragement allowed me to overcome the difficulties of the dissertation process. In addition, I would also like to thank the staff of Fortune Institute of Technology of Kaohsiung. Your materials, information, and assistance in handling the work of data collection have allowed me to complete the challenges of dissertation research.

**EFFECTIVENESS OF INSTRUCTIONAL STRATEGIES EMPHASIZING
COOPERATIVE LEARNING IN THE ACQUISITION OF ENGLISH BY
TAIWANESE UNIVERSITY STUDENTS**

Mei-Ling Chen

Abstract

The primary purpose of this study was to explore and analyze Taiwanese university students in the effectiveness of cooperative learning strategies in the acquisition of English. This study employed the Theory of Second Language Acquisition (SLA) and Cooperative Learning (CL) as the framework to explain the interrelationship among second language learner factors, cooperative learning strategies, and English language proficiency (ELP).

This nonexperimental, correlational study used convenience sampling. Participants from Taiwan received e-mail invitations and voluntarily completed the online survey questionnaires. The survey was administered to a sample of undergraduate students who had attended the daytime Fortune Institute of Technology of Kaohsiung in Taiwan and had studied English as a foreign language. There were 396 online questionnaires applicable for data analysis.

There were three significant variables in this research, including language learner factors, cooperative learning strategies, and English language proficiency. The independent variables were language learner factors and cooperative learning strategies. The dependent variable was English language proficiency. Language learner factors were measured by Taiwanese university students' perceptions of learning English and included six dimensions: motivational intensity, language classroom anxiety, language aptitude,

classroom social distance, frequency of participation in cooperative learning, and English language proficiency. The content of the online survey included two parts. The first part contained socio-demographic characteristics of gender, age, education category and years of experience learning English. The second part inquired about language learner factors, cooperative learning strategies, and English language proficiency. The data analysis employed the statistical software of SPSS to conduct descriptive analysis, multiple regression analysis, reliability analysis, and validity analysis.

Findings indicated that learner factors of motivation, anxiety, language aptitude, social distance, and learning strategies had a strong positive and significant relationship with English language proficiency. In addition, frequency of participation in cooperative learning strategies had a moderately strong relationship with English language acquisition proficiency. Findings also indicated age and gender of learner factors rarely appear to affect English language proficiency, but these may be fundamental requirements for English language acquisition proficiency. The practical implications, limitations, and recommendations for future study are further discussed.

TABLE OF CONTENTS

	Page
ACKNOWLEDGEMENTS	ii
ABSTRACT	iv
LIST OF TABLES	x
LIST OF FIGURES	xiii
CHAPTER I: INTRODUCTION TO THE STUDY	1
Introduction and Background to the Problem	1
Purpose of Study	4
Definitions of Terms	6
Justification of the Study	9
Delimitations and Scope	10
Organization of the Study	11
CHAPTER II : LITERATURE REVIEW, THEORETICAL FRAMEWORK, RESEARCH QUESTIONS, AND HYPOTHESES	13
Review of the Literature	13
Second Language Acquisition	13
First, The Acquisition-Learning Hypothesis	14
Second, The Natural Order Hypothesis	15
Third, The Monitor Hypothesis	15
Fourth, The Input Hypothesis	17
Fifth, The Affective Filter Hypothesis	18
Learner Factors that Affect ELP	18
Age Differences	19
Motivation	20
Anxiety	21
Language Aptitude	22
Social Distance	23
Learning Strategies	24
Various Instructional Strategies in ELP	25
Approach 1: Language Immersion	25
Approach 2: Strategopedia	26
Approach 3: Communicative Approach	26
Essential Elements of Cooperative Learning	26
Principle 1: Positive Interdependence	27
Principle 2: Individual Accountability	28
Principle 3: Face-to-Face Interaction	28
Principle 4: Social Skills	29
Principle 5: Group Processing	29

TABLE OF CONTENTS

(Continued)

	Page
Cooperative Learning as one type of Instructional Strategy	30
Strategy 1: Restructuring	30
Strategy 2: One-Centered	31
Strategy 3: Unified Group	31
Strategy 4: Dyad	31
Strategy 5: Small Group	32
How CL Enhances the L2 Process and Supports L2 Theory	32
Assessment of English Language Proficiency	33
Listening Assessment	34
Speaking Assessment	34
Reading Assessment	35
Writing Assessment	35
Theoretical Framework	36
Research Questions	41
Hypotheses	41
 CHAPTER III: RESEARCH METHODOLOGY	 46
Research Design	46
Population and Sampling Plan	47
Target Population	47
Accessible Population	48
Convenience sampling Plan	48
Instrumentation	51
Part 1: Socio-Demographic Profile	51
Part 2: Motivation	52
Part 3: Anxiety	54
Part 4: Language Aptitude	59
Part 5: Social Distance	62
Part 6: Frequency of Participation in Cooperative Learning	64
Part 7: English Language Proficiency (Listening, Speaking, Reading, Writing)	65
Procedures: Ethical Considerations and Data Collection Methods	67
Methods of Data Analysis	69
Research Questions	73
Hypotheses Testing	73
Other Analyses	75
Evaluation of Research Methods	75

TABLE OF CONTENTS

(Continued)

	Page
CHAPTER IV: RESULTS	78
Socio-Demographic Characteristics of the Data-Producing Sample	78
Research Question 1: Descriptive Analysis for Question 1	82
Research Question 2: Descriptive Analysis for Question 2	83
Research Question 3: Descriptive Analysis for Question 3	85
Descriptive Analysis for Grade in English Class	87
Hypothesis 1: Multiple Regression Analysis for Hypothesis 1	90
Hypothesis 2: Multiple Regression Analysis for Hypothesis 2	101
Hypothesis 3: Multiple Regression Analysis for Hypothesis 3	112
Reliability Analysis	124
Validity Analysis	125
CHAPTER V: DISCUSSION	128
Interpretations	130
Socio-Demographic Characteristics of Taiwanese	130
University Students	
Research Question 1	131
Research Question 2	132
Research Question 3	133
Research Question to Obtain Grade in English Class	134
Hypothesis 1	135
Hypothesis 2	138
Hypothesis 3	141
Reliability Analysis	146
Validity Analysis	147
Practical Implications	148
Conclusions	149
Limitations	150
Recommendations for Future Study	152
REFERENCES	154
BIBLIOGRAPHY	161

TABLE OF CONTENTS

(Continued)

APPENDIXES

Appendix A:	What Are The Differences?	167
Appendix B:	Cooperative Learning Classroom Arrangement	169
Appendix C:	Permission to Use Accessible Population	171
Appendix D:	Authorization for Voluntary Consent	173
Appendix E:	Authorization for Voluntary Consent (Chinese Version)	177
Appendix F:	Print Outs of Online Authorization for Voluntary Consent	180
Appendix G:	Certification of Translation Authorization for Voluntary Consent	185
Appendix H:	IRB Approval	187
Appendix I:	Survey Instrument	189
Appendix J:	Survey Invitation	199
Appendix K:	Permission to use the figures of "What are the Differences" and "Cooperative Learning Classroom Arrangement"	201
Appendix L:	Permission to Use the Attitude/Motivation Test Battery	203
Appendix M:	Permission to Use the Foreign Language Classroom Anxiety Scale (FLCAS)	206
Appendix N:	Permission to Use the Pimsleur Language Aptitude Battery (PLAB)	211
Appendix O:	Permission to Use the Classroom Social Distance Scale	214
Appendix P:	Permission to Use Responses Categories of Instructor-Centered Teaching Techniques	216
Appendix Q:	Permission to Use the Four (Listening, Speaking, Reading, Writing) Skills Assessment Scale	218

CURRICULUM VITAE	220
------------------	-----

LIST OF TABLES

Number		Page
3-1	Items of the Motivation Intensity of the Attitude/Motivation Test (AMT)	53
3-2	Items of the Foreign Language Classroom Anxiety Scale (FLCAS)	56
3-3	Items of the Classroom Social Distance Scale	60
3-4	Items of the Pimsleur Language Aptitude Battery (PLAB)	63
3-5	Items of the Frequency of Participation in Cooperative Learning Scale	64
3-6	Items of the Four (Listening, Speaking, Reading, Writing) Skills Assessment Scale	66
4-1	Socio-Demographic Characteristics of the Sample by Gender	79
4-2	Socio-Demographic Characteristics of the Sample by Age	80
4-3	Socio-Demographic Characteristics of the Sample by Education Category	81
4-4	Socio-Demographic Characteristics of the Sample by Years of Experience Learning English	82
4-5	Descriptive Analysis of Second Language Learner Factors	83
4-6	Descriptive Analysis of the Frequency of Participation in Cooperative Learning Strategies	84
4-7	Descriptive Analysis of the Central Tendency of Participation in Cooperative Learning Strategies	85
4-8	Descriptive Analysis of the Frequency of English Language Proficiency in Listening, Speaking, Reading and Writing	86
4-9	Descriptive Analysis of the Central Tendency of English Language Acquisition Proficiency in Listening, Speaking, Reading and Writing	87
4-10	Descriptive Analysis of the Participants of Grade in English Class	88
4-11	Frequency of Grade in English Class	88

LIST OF TABLES

(Continued)

Number		Page
4-12	Multiple Regression Analysis of Learner Factors on English Language Proficiency	91
4-13	Multiple Regression Analysis of Learner Factors on English Language Proficiency in Listening	93
4-14	Multiple Regression Analysis of Learner Factors on English Language Proficiency in Speaking	95
4-15	Multiple Regression Analysis of Learner Factors on English Language Proficiency in Reading	97
4-16	Multiple Regression Analysis of Learner Factors on English Language Proficiency in Writing	99
4-17	Multiple Regression Analysis of the Frequency of Participation in Cooperative Learning Strategies on English Language Proficiency	102
4-18	Multiple Regression Analysis of the Frequency of Participation in Cooperative Learning Strategies on English Language Proficiency in Listening	104
4-19	Multiple Regression Analysis of the Frequency of Participation in Cooperative Learning Strategies on English Language Proficiency in Speaking	106
4-20	Multiple Regression Analysis of the Frequency of Participation in Cooperative Learning Strategies on English Language Proficiency in Reading	108
4-21	Multiple Regression Analysis of the Frequency of Participation in Cooperative Learning Strategies on English Language Proficiency in Writing	110
4-22	Multiple Regression Analysis of Learner Factors and the Frequency of Participation in Cooperative Learning Strategies on English Language Proficiency	114

LIST OF TABLES

(Continued)

Number		Page
4-23	Multiple Regression Analysis of Learner Factors and the Frequency of Participation in Cooperative Learning Strategies on English Language Proficiency in Listening	116
4-24	Multiple Regression Analysis of Learner Factors and the Frequency of Participation in Cooperative Learning Strategies on English Language Proficiency in Speaking	119
4-25	Multiple Regression Analysis of Learner Factors and the Frequency of Participation in Cooperative Learning Strategies on English Language Proficiency in Reading	121
4-26	Multiple Regression Analysis of Learner Factors and the Frequency of Participation in Cooperative Learning Strategies on English Language Proficiency in Writing	124
4-27	Cronbach's Coefficient Alpha for Internal Consistency Reliability of Scales	125
4-28	Pearson Product Moment Correlation Coefficient for Convergent Validity of Scales	127

LIST OF FIGURES

Number		Page
2-1	English Language Proficiency of Variables	40
4-1	Distribution of the Sample by Gender	79
4-2	Distribution of the Sample by Age	80

CHAPTER I

INTRODUCTION TO THE STUDY

Introduction and Background to the problem

There is a growing interest in English language proficiency (ELP) and the need for effective instructional strategies to improve ELP, emphasizing English language acquisition. This study will focused on Taiwanese undergraduate students. Second language acquisition is a process in which a child or an adult attempts to become competent in a second language after acquiring the primary language through exposure to the target language in a natural environment. Many discussions about English language proficiency focus on instructional strategies that enhance the process of English language proficiency emphasizing cooperative learning (CL) (Christison, 1990; Chafe, 1998; Greenfield, 2003). Much of the literature on English as a second language (ESL) instruction suggests that the natural environment or the “language immersion” environment provides students with the best opportunity for learning and practice (Chamot & O’ Malley, 1994; Richard-Amato, 2003).

In language immersion courses, most of the language learners are from the language majority population and are part of the dominant cultural group. Second language is the medium for communication and instruction as students are placed in content-area classes. The instructor may or may not be familiar with a student's first language and culture. However, the instructor is prepared in second language and content teaching methodology and has some knowledge of the features of different language (Richard-Amato, 2003). In second language teaching, there are many models designed to teach the academic language of a specific subject area. For example, young

students learn English in immersion classes in Canada. Instructors focus on academic content and use a number of techniques to make the content accessible to second language students. In addition in the United States, there are dual language immersion programs in which all students learn a second language through academic content. This approach is consistent with teaching whole to part, centering on the language learner and making learning meaningful by creating the best opportunities for social interaction and including students' primary languages and cultures in the courses (Freeman & Freeman, 1998). In the less intensive second language immersion courses, a content-enriched curriculum can be successful in maintaining language learner interest through the cognitively demanding tasks that are typically found in the traditional language course (Chamot & O'Malley, 1994). In the past, a traditional English classroom might be equally beneficial for some students, particularly when the goal is learning structured communication tasks (including grammar) that are predictable. The process of second language acquisition does not require extended use of grammatical rules and does not need grammar drills (Krashen, 1987).

There are a number of contextual factors including age differences, motivation, anxiety, language aptitude, social distance, and learning strategies that influence ELP learning: (a) a learner's age influences ELP learning. Long (1990) pointed out that the initial language acquisition and the ultimate level of achievement depend on the age at which learning begins; (b) Crookes and Schmidt pointed out that motivation has been identified as the language learner's direction in regard to the goal of learning a second language (as cited in Norris-Holt, 2001); (c) anxiety plays an intermediate role between motivation and personality. Motivation is related to anxiety in that high motivation with

a subjective desire of accomplishment increases anxiety; (d) Skehan (1989) indicated that “aptitude is consistently the best predictor of language learning success” (p. 38). Pimsleur (1966) defined that aptitude for learning a second language includes three factors—verbal intelligence, motivation, and auditory ability; (e) Social (group) distance and psychological (individual) distance from speakers of the second language community may result in learners of the target language receiving a decreased amount of input (as cited in Gass & Selinker, 2001); and (f) learning strategies play an essential role in English language proficiency (Alcon, 1998; Gass & Selinker, 2001; Walqui, 2000). The effectiveness of ELP is oftentimes measured by student achievement. Achievement is defined as an outcome measure of learning resulting from effective strategies in English language proficiency and communicative competence in the components of listening, speaking, reading, and composition (writing).

Krashen, who is the most influential theoretician in second language acquisition (SLA) in the past three decades (1988), stated that students experiencing the process of second language acquisition need meaningful interaction in the target language—natural communication, whereby learners are concerned not with the form of their expressions but with the messages they are receiving and understanding. Johnson and Johnson (1999) believed that the best teaching methods are those that supply comprehensible input in low-anxiety situations as supported by Krashen or contexts that implement cooperative learning by understanding input that contains structures beyond the current level of competence. Communication has long been the desired outcome of an English language proficiency classroom in which the students acquire the ability to speak as well as read and write English.

Cooperative learning (CL) is one of the most remarkable and rich areas of theory, research, and practice in education to attain the goal of communicating in a second language. Cooperative learning, which is also called peer learning or collaborative learning, is a way of teaching in which students at various performance levels work together to accomplish shared learning goals (Johnson & Johnson, 1999). The students are responsible for one another's learning as well as their own. Thus, the success of one student helps other students become successful. Cooperative learning gives students the opportunity to teach, which is one of the best ways to learn, and provides more sources of information than are available in a traditional class (Johnson, Johnson & Holubec, 1993) (Appendix A and K).

Cooperative learning is a powerful approach to learning a second language, which has an effective pedagogy and world view (Cohen, Brody, & Sapon-Shevin, 2004). This study was justified by considering a strategic significance for cooperative learning increasing motivation and retention, which will help students develop positive images of self and of English language proficiency. In addition, in the age of knowledge, English is a common language worldwide. Language learners need to explore factors affecting the acquisition of English language proficiency in order to reach English levels that are native-like. Therefore, this study provided an examination of the relationship among learner factors, cooperative learning strategies, and the development of four language skills in English for Taiwanese undergraduate students (age 18 or older).

Purpose of the Study

The broad purpose of this nonexperimental and correlational (explanatory) online survey research study was to provide explanatory knowledge of the relationship among

learner factors, cooperative learning strategies, and the development of four language skills in the acquisition of English language proficiency for Taiwanese undergraduate students (age 18 or older). The specific purposes were to:

1. Describe the socio-demographic characteristics, learner factors of motivation, anxiety, language aptitude, social distance, and English language acquisition proficiency for Taiwanese students (age 18 or older).
2. Explain the relationship among the learner factors of age, gender, education, years learning English, motivation, anxiety, language aptitude, social distance, and learning strategies of English language acquisition proficiency for Taiwanese students (age 18 or older).
3. Explain the relationship among the frequencies of participation in cooperative learning strategies of restructuring, one-centered, unified group, dyad, and small group of English language acquisition proficiency for Taiwanese students (age 18 or older).
4. Explain the relationship among learner factors (age, gender, education, years learning English, motivation, anxiety, language aptitude, social distance, and learning strategies), frequency of participation in cooperative learning strategies (restructuring, one-centered, unified group, dyad, and small group), and English language acquisition proficiency for Taiwanese students (age 18 or older).

Research Design

This quantitative, nonexperimental, correlational (explanatory) survey research design was used to answer the research question about English language proficiency for

Taiwanese students and to test the relationship between cooperative learning, learner factors, and English language proficiency (four language, self-reported assessment skills). The survey was conducted online to collect data

The dependent variable of English language proficiency was measured using a four-skill, self-reported assessment for Taiwanese students (Appendix I). The independent and attribute variables in this study were the following: learner factors of age, gender, education, years learning English, motivation, anxiety, aptitude, social distance, and cooperative learning strategies. The demographic variables of age, gender, education, and years learning English were measured by an online survey, developed by the researcher (Demography Profile) (Appendix I). All of the following also were measured by an online survey and appear in Appendix I: the learner factors of motivation, anxiety, language aptitude, social distance; and the frequency of participation in cooperative learning strategies (restructuring, one-centered, unified group, dyad, and small group strategies).

The sample consisted of Taiwanese second language learners located in Taiwan. Descriptive statistics (frequency distributions and measures of central tendency) was used to answer the research questions. Several multiple regression analyses were used to test each of the hypotheses.

Definitions of Terms

Attribute Variables

Socio-Demographic Characteristics of Language Learners

Theoretical definition. According to the Critical Period Hypothesis, there is an age-related point beyond which it makes learning a second language more difficult to the

same degree as native speakers (Gass & Selinker, 2001).

Operational definition. In this study, age referred to a different age in years and will influence English language proficiency. The *Socio-Demographic Profile* developed by the researcher included four demographic questions that measure gender, age, education category, and years of experience learning English and is shown in Appendix E, Part 1 of the Survey.

Independent Variables

Motivation

Theoretical definition. Motivation is defined as the language learner's direction in regard to the goal of learning a second language (Norris-Holt, 2001).

Operational definition. In this study, motivation refers to which language learners have intensity motivation to learn English. Motivation was measured by the Motivational Intensity subscale of the *Attitude/Motivation Test Battery* developed by Gardner (1985). The Motivational Intensity scale consists of ten self-report multiple choice items and is shown in Appendix E, Part 2 of the Survey.

Anxiety

Theoretical definition. Motivation is obviously related to anxiety in that high motivation with a subjective desire of accomplishment increases anxiety. Whether a person is more or less anxious is connected to personality (Gass & Selinker, 2001). Social anxiety could involve teachers, peer learners, and interlocutors. Test anxiety is the fear of not doing well on a test, which has to do with goals of impression management (Gass & Selinker, 2001).

Operational definition. In this study, anxiety referred to which language learners have experienced anxiety when they are learning English. Anxiety was measured by the *Foreign Language Classroom Anxiety Scale (FLCAS)* developed by Horwitz, Horwitz, and Cope (1986). The scale consists of 33 items, and each item is measured on a 5-point scale ranging from strongly agree (scale point 1) to strongly disagree (scale point 5) and is shown in Appendix E, Part 3 of the survey.

Language Aptitude

Theoretical definition. Language aptitude can be defined as the six-component views of language aptitude—grade point average in academic areas other than foreign languages, interest in learning a foreign language, vocabulary, language analysis, sound discrimination, and sound-symbol association (Pimsleur, 1966).

Operational definition. In this study, aptitude referred to which language learners have the ability to learn a second language. Aptitude was measured by the *Pimsleur Language Aptitude Battery (PLAB)* developed by Pimsleur (1966). The researcher used Part 3 of the PLAB, which consists of only 10 multiple choice questions and is shown in Appendix E, Part 4 of the survey.

Social Distance

Theoretical definition. Social distance is based on the concept that language learners have to adapt to the target language culture in order for successful English language acquisition that results in increased integration with target language members (Gass & Selinker, 2001).

Operational definition. In this study, social distance referred to the distance between different groups of society, which include social class, race, and sexuality. The

social distance is measured by the *Classroom Social Distance Scale* developed by Sherman and Burgess (1985). This scale includes five questions and is shown in Appendix E, Part 5 of the Survey.

Dependent Variable

English Language Proficiency

Theoretical definition. English language proficiency (ELP) is defined as “the learning of a non-native language in the environment in which that language is spoken” or the target language community (Gass & Selinker, 2001, p. 5).

Operational definition. In this study, English language acquisition referred to the process of attempting to learn a second language (English) after the learner has already become competent at a first language (Chinese Mandarin). English language acquisition (listening, speaking, reading, and writing), was measured by the Self-Reported Learning of the Four Language Skills, which was developed by Greenfield (2003). The skills consist of four items and are shown in Appendix I, Part 7 of the survey.

Justification of the Study

Cooperative learning is a powerful approach to learning a second language, which has an effective pedagogy and world view (Cohen, Brody, & Sapon-Shevin, 2004). However, no study was found that examined cooperative learning strategies in the acquisition of English in Taiwan. This study was justified by considering a strategic significance for cooperative learning to increase motivation and retention, which will help students develop positive self-images and English language proficiency. Cooperation is much more than being physically near other students. The opportunities from helping and sharing materials with other students in the class learning English as a foreign

language have many positive benefits, which have been cited in the research for three decades.

This study attempted to integrate various constructs into a conceptual model for the English language learners. This study provided construct validation of this model by examining the relationships among learner factors, cooperative learning strategies, and development of four language skills in English language proficiency for Taiwanese university students. The results of the study enabled the examination of newly developed measures (Self-Reported Learning of the Four Language Skills) by Greenfield (2003). The results of the study contributed to theory development for future scholarly inquiry into the field of English language acquisition proficiency. In addition, in the age of knowledge, English is a common language worldwide, and language learners need to explore factors affecting native-like proficiency in the English language.

This study was researchable because the study contained scientific questions, and all variables were measurable. The study was feasible because it was implemented in a reasonable amount of time where participants and subjects were available and concepts in the theoretical frameworks were measured. All variables were reviewed by statistical analyses to answer research questions and hypotheses in this study. The study implemented procedures to protect the rights of human subjects during the research.

Delimitations and Scope

This study was conducted based on the following delimitations and scope that were the boundaries of the study:

1. The geographic area and setting was limited to the specific Fortune Institute of Technology of Kaohsiung in Taiwan, in order to promote a more

homogeneous sample and limit the influence of other extraneous variables.

2. Language learners were undergraduate students at the Fortune Institute of Technology.
3. In Taiwan, the participants who had studied English from junior high school until high school were expected to be able to read the survey in English because they had taken six years of English courses; therefore, only the authorization for voluntary consent was translated.
4. The survey participants were able to listen, speak, read, and write English, and were 18 years old or older.
5. The survey participants had been living in Taiwan for the past six months.
6. The survey participants had studied English for at least one year.
7. The survey participants agreed to participate in this study and complete a survey (specify online).

Organization of the Study

Chapter I provides an overview of the study. It includes an introduction and background to the problem, the purpose of the study, research questions, research hypotheses, research design, the definitions of terms, the justification of the study, and the delimitations and scope. This chapter offers an introduction to the correlational design of the study that uses a cooperative learning approach to help Taiwanese undergraduate students in English language acquisition proficiency.

Chapter II of the study provides an in-depth review of second language acquisition (SLA) model, learner factors that affect ELP, various instructional strategies in ELP, essential elements of cooperative learning (CL), cooperative learning as one type

of instructional strategy, how CL enhances the L2 process and supports L2 theory, and assessment of English language acquisition. This chapter also provides a critical analysis of related theoretical and empirical literature about English language acquisition and cooperative learning. The formation of a hypothesized conceptual model was based on the foundations provided in the literature review. Research hypotheses are also presented in this chapter.

Chapter III of the study presents the research methodology that addresses the questions and hypotheses about relationships among learner factors, cooperative learning strategies, four language skills (listening, speaking, reading, and writing), and English language acquisition proficiency. It includes the research design, population and sampling plan, the survey instruments, procedures and ethical aspects, methods of data analysis, and evaluation of research methods. The instrument design section includes the discussion of the scale used to measure the second language learner factors and English language acquisition proficiency. The methods of data analysis included descriptive statistics and multiple regression analysis.

Chapter IV provides the results of socio-demographic characteristics of the data-producing sample and the findings of research questions and hypotheses.

Chapter V provides a discussion of the findings and interpretations of the statistical results, practical implications, and conclusions in this present study of relationships between language learner factors, cooperative learning strategies and English language acquisition proficiency. In addition, the limitations and recommendations for future study are also discussed in this study.

CHAPTER II

LITERATURE REVIEW, THEORETICAL FRAMEWORK, AND RESEARCH

HYPOTHESES

Review of the Literature

Second Language Acquisition

Second language acquisition (SLA) refers to the process of attempting to learn a second language after the learner has already become competent in a first language. Furthermore, SLA is the phrase utilized to describe the process that people experience when faced with a need to use a language other than their native language for communication. Grass and Selinker (2001) indicated that “English language acquisition refers to the learning of a nonnative language in the environment in which that language is spoken” or the target language community (p. 5). Second language acquisition theories were developed after substantial research that compared the processes of first language acquisition theories and second language acquisition theory. Most instructors suggest that the natural environment or “language immersion” similar to a first language provides learners with the best opportunities for learning success (Ebert & Hawk, 1998). A number of theories of second language acquisition were presented either deductively or inductively through research in the ESL classroom (Conrad, 2001). Krashen’s model (2003) is one of the most influential and well-known theories of second language acquisition. In the early 1980s, Krashen developed the overall theory of second language acquisition that continues to have important implications for second language acquisition and teaching across all levels and disciplines. The five main hypotheses, the core of

current theory on language acquisition, are the following (Krashen, 1982, 1985, 1987, 1988, 2002, 2003):

First, The Acquisition-Learning Hypothesis

The acquisition-learning distinction is the most fundamental of all the hypotheses. There are two independent systems of second language performance: “the acquired system” and “the learned system.” The acquired system is the product of a subconscious process very similar to the process of first language acquisition. Language acquirers are not usually aware of acquiring any new knowledge; the new knowledge is stored in the acquirer’s brain subconsciously. This subconscious process requires meaningful interaction in the target language or natural communication. The research strongly supports that both children and adults are able to subconsciously acquire language, using the new language for communication. In nontechnical language, acquisition is “picking up” a language that is the way of implicit learning, informal learning, and natural learning. In the “acquired system,” learners are not consciously aware of the rules of language acquired, but develop a “feel” for what is right or wrong, a process that is very similar to acquiring one’s primary language (Krashen, 1982).

The “learned system” is a system of language learning by formal instruction to develop competence in a second language and provides conscious knowledge of a second language. This kind of language learning takes place almost always in school or an academic environment. When students are learning a second language, they learn the rules, become aware of these rules, and are able to talk about the rules. In nontechnical language, learning is “knowing about” a language that refers to “grammar” and “rules.” Furthermore, Krashen concluded that error correction has little effect on subconscious

acquisition, which is useful for conscious learning. Error correction may help the learner to elicit or figure out the correct form or rule (Krashen, 1987).

Second, The Natural Order Hypothesis

Linguists in language acquisition research have found that the acquisition of grammatical structures proceeds in a predictable order. Some of the grammatical structures of language tend to be acquired early and other structures come later. For example, according to Krashen (2003), the progressive marker *ing* is acquired early in first language acquisition of English; and the third person singular *-s* is acquired much later, which may arrive in six months to a year. In adult second language acquisition, the progressive marker is also acquired fairly early, but the third person singular may arrive later or never at all. Basically, each acquirer does not proceed in the same order, but the variation is not extreme. The order of acquisition for first and second languages is similar, but not the same. This order also does not necessarily depend on simplicity of form and could be influenced by classroom instruction. The *natural order hypothesis* does not seek to be a language program, but rather presents evidence to justify individual differences among learners at various proficiency levels (Krashen, 2003). It also provides justification to vary the presentation of language forms when teaching a second language.

Third, The Monitor Hypothesis

The monitor hypothesis explains how acquisition and learning are used in specific ways. The acquisition system is the “utterance initiator” in a second language and is responsible for fluency. The learning system performance is the role of the “monitor” or the “editor.” The monitor acts in a planning, editing, and correcting

function. The learner uses the conscious monitor to correct sentences after speaking aloud, which is called “self-correction.” In order to use the monitor system successfully, three conditions are needed, according to Krashen (2003):

1. Know the rules. This is a very difficult requirement. Linguists admit that they do not know all the rules of any language. Moreover, language teachers do not teach all the rules in the textbooks. Even the best students do not learn all the rules that teachers teach. In addition, the best students do not remember all the rules they have learned from a language teacher. This is because many rules are too complex and there are many inconsistencies in the rules to apply when students are engaging in spontaneous conversation.
2. Thinking about correctness, or focusing on form. This makes thinking about both form and meaning at the same time difficult.
3. Sufficient time is needed. One must think about and use conscious rules effectively to provide enough time for a second language performer to engage in conversation (p. 3).

In addition, Krashen (1987) pointed out that there are three basic types of performers that can be explained in terms of differential use of the conscious monitor:

1. Monitor over-users. Learners who attempt to monitor all the time and performers who are always checking conscious knowledge of the second language. Therefore, learners may speak slowly and often self-correct in the middle of an expression that cannot then be spoken with real fluency.
2. Monitor under-users. Second language learners who have not learned, or if they have learned, prefer not to use conscious knowledge. Typically, the

under-users are not influenced by error correction, which can self-correct by using a “feel” for correctness, depending on the acquired system, and learners often do this when speaking the primary language.

3. Optimal monitor user. These are performers who use the monitor system appropriately in a way which does not interfere with communication. Optimal monitor users can therefore, use acquired competence as a supplement when communicating with others (pp. 18-20).

Fourth, The Input Hypothesis

The input hypothesis attempts to explain the important questions in the field of language acquisition and the answers that influence all areas of language teaching (Krashen, 1987). The hypothesis concerns itself with how learners acquire language. Second language learners acquire language through understanding the message from reading or hearing; this is called “comprehensible input.” Comprehensible input encompasses the language that is understood by the learner and is significant in teaching language. Furthermore, the input hypothesis is concerned only with “acquisition,” not “learning.” The input hypothesis can be restated in the natural order hypothesis: How does the learner move from one stage to another? There are four stages to the process. If the learner is at “stage 3,” how can the learner progress to “stage 4”? In more detail, if i represents current input that is comprehensible, how does the learner move from i to $i+1$ (to the next level)? In other words, the learner improves and progresses along the “natural order” when receiving second language “input” that is one step beyond the current stage of linguistic competence. However, not all learners are at the same level of

linguistic competence simultaneously (Krashen, 1987). For this reason, Krashen (1987) suggested that natural communicative input is important for designing a syllabus.

Fifth, The Affective Filter Hypothesis

The affective filter hypothesis states how affective variables relate to the process of second language acquisition. That is, the affective filter hypothesis indicates that affective variables do not influence language acquisition directly, but keep comprehension input from reaching what Chomsky (1972) called the “language acquisition device.” The language acquisition device is the part of the brain responsible for language acquisition. Therefore, Krashen (2003) claims that learners with high motivation, self-confidence, a positive self-image, and a low level of anxiety are better equipped for success in second language acquisition because language input will reach the part of the brain responsible for language acquisition. In contrast, low motivation, low self-confidence, and high anxiety can combine to raise the affective filter and form a mental block that prevents comprehensible input from being used for acquisition (Krashen, 1985). Language input eventually becomes language output, in other words performance in the second language, whereby the four language skills may be assessed.

Learner Factors that Affect ELP

Several learner factors may be responsible for affecting English language proficiency (ELP). The literature review included a focus on different individual factors that include the following: (a) age differences; (b) motivation (goal, effortful behavior, and attitudes); (c) social distance and psychological distance; (d) aptitude; (e) anxiety; and (f) learning strategies (Alcon, 1998; Gass & Selinker, 2001; Walqui, 2000). These factors play an important role in second language learning and processing. Some

acquirers are more successful language learners than others, who demonstrate the phenomenon of “fossilization.” This means that no matter what the learners do, they will always “be stuck” or have reached a “plateau” in the second language at some distance from the expected goal. The phenomenon of fossilization often occurs in a second language learner's advanced stage and may also happen in a specific skill area such as pronunciation (Alcon, 1998).

Age Differences

One of the most important factors in English language acquisition is age. Learning a second language is a difficult task, but most people do not understand how the difficulties increase with age (DeCroix, 2001). Linguists commonly believe that young children are better second language learners than adults, which is reflected in the Critical Period Hypothesis (Gass & Selinker, 2001). Adults are less successful in English language acquisition than children, but adults learn a second language through an interchange route that is different from the way children learn (Harley, 1987). College-aged adults do very well on most tests measuring second language learning more rapidly than children during the early stages of acquisition. In other words, the older individual learners have the ability to quickly learn phonology, especially suprasegmental phonology. Furthermore, adults have greater cognitive abilities and capacity to negotiate input to learn a second language successfully. There may be a greater extent on a specific developed Language Acquisition Device (Gass & Selinker, 2001). According to the Critical Period Hypothesis, there is an age-related point beyond which it makes learning a second language more difficult to the same degree as native speakers (Gass & Selinker, 2001). However, some researchers disagree with this point.

In 1987, Harley suggested that children's successful learning of a second language in the nursery and the street is due to their involvement in real communication with members of the target language group. On the other hand, Harley (1987) explained the adult's language input may be provided in the classroom, since the outside environment is usually unwilling to provide the adult with input without reentering the classroom.

In addition, individuals generally do not achieve a native-speaker accent in a second language unless the acquirer who is learning the language begins as early as age 6. Research has shown that adult learners cannot achieve a native-speaker proficiency in phonology (Gass & Selinker, 2001). Flege (1999) suggested that the issue in regard to the Critical Period Hypothesis is whether or not there is a gradual decline or a precipitous drop off in learning abilities in this specific skill with adult learners. Long (1990) pointed out that (a) the initial language acquisition and the ultimate level of achievement depend on the age at which learning begins; (b) there are sensitive periods influencing second language development during which the acquisition of different linguistic abilities is successful and after which it is incomplete; (c) the age-related loss in ability is cumulative, affecting first one linguistic domain and is not limited to phonology; and (d) the deterioration in some individuals begins as early as age 6 (p. 251).

Motivation

Some social psychologists have attempted to explain that differential success in learning a second language is based on motivation. Individuals who are motivated to learn a second language acquire skills quickly and obtain a greater degree of mastery. Therefore, studies have shown that motivation is a predictor of second language learning

success (Gass & Selinker, 2001). Norris-Holt (2001) pointed out that motivation has been identified as the language learner's direction in regard to the goal of learning a second language. In addition, Gardner (1985) proposed that there are four aspects of motivation: a goal, effortful behavior, a desire to attain the goal, and favorable attitudes toward the activity in question. Furthermore, effort is composed of these factors: an inherent need to achieve, good study habits, and a desire to please a teacher (Gass & Selinker, 2001). In 1985, Deci and Ryan indicated that intrinsic motivation is related to basic human requirements for competence, autonomy, and relatedness. The intrinsically motivated activities are those that learners engage in for their own purposes because of their value, interest, and challenge (Deci & Ryan, 1985).

Anxiety

Anxiety plays an intermediate role between motivation and personality. Motivation is obviously related to anxiety in that high motivation with subjective desire of accomplishment increases anxiety. Actually, whether a person is more or less anxious is connected to personality. Depending on the source of the anxiety, anxiety is divided into different types (Gass & Selinker, 2001). Social anxiety is concerned with constructing a good impression on others. However, in English language learning situations, social anxiety could involve teachers, peer learners, and interlocutors. On the other hand, test anxiety is the fear of not doing well on a test, which has to do with goals of impression management. Anxiety clearly affects English language learning. As Geen (1991) described it:

Social anxiety essentially inhibits behavior. It may, for example, bring about disengagement—avoidance of social situations, withholding of communication...

or breaking of eye contact...--or replacement of meaningful communication with innocuous sociability (p. 392).

The result for a learner of a new language is that anxiety has a negative effect on learning.

Language Aptitude

Language aptitude is an important differentiating factor that has largely been ignored in English language learning. Skehan (1989) indicated that “aptitude is consistently the best predictor of language learning success” (p. 38). Furthermore, Pimsleur (1966) described that a number of intellectual and motivational factors thought to contribute to success in English language learning, assess different aspects of four factors verified to be significantly related to English language learning: grade point average, motivation, verbal ability, and auditory ability. The language aptitude battery consists of six parts:

1. Grade point average in academic areas other than foreign languages—how well the learner did in four major subjects (English, arithmetic-mathematics, social studies-history, and science) when last given grades in these subjects (grade point average).
2. Interest in learning a foreign language—how interested the learner is in studying a foreign language (motivation).
3. Vocabulary, which is the ability to learn word knowledge in English and to think in terms of a foreign language (verbal ability).
4. Language analysis, which is the ability to learn reason logically in terms of a foreign language (verbal ability).

5. Sound discrimination, which is the ability to learn new phonetic distinctions and to recognize them in different contexts (auditory ability).
6. Sound-symbol association, which is the ability to learn an association of sounds with their written symbols (auditory ability).

In English language proficiency, the milieu of generative linguistic and psychology led to a minimization of aptitude factors. Aptitude measure was found to be a better predictor of successful English language proficiency in the classroom environment. In other words, aptitude is an important indicator of English language proficiency in both classroom and nonclassroom environments (Gass & Selinker, 2001).

Social Distance

Social distance and psychological distance from speakers of the second language community may result in learners of the target language receiving a decreased amount of input. These two important factors of psychological (individual) distance and social (group) distance were developed by Schumann's Acculturation Model (Gass & Selinker, 2001). According to Schumann in 1978, acculturation is the most critical variable of second language acquisition. That is, as language learners acculturate, learners are more likely to learn. Otherwise, these individuals will not learn. Therefore, a chain reaction occurs, including contact in the middle of this learning process, and acquisition is achieved as the learning outcome (as cited in Gass & Selinker, 2001). Acculturation is based on the concept that language learners have to adapt to the target language culture in order for successful SLA that results in increased integration with target language members. In addition, a social variable in the acculturation model that needs to be considered is the extent to which one group is dominant over another group. For

example, the L2 group may be dominant (e.g., colonization), or the L1 group may be dominant (e.g., immigration). If the L2 group is dominant, learning is less likely to take place because the members of the L2 community may choose not to communicate or engage in social activity with members of the L1 group. If the L1 group is dominant, there may be less motivation to learn the second language since the need is diminished. One example of this is the current Cuban population in Miami, Florida, where the Spanish language is prominently utilized.

Learning Strategies

It is evident that some second language learners are more successful than others. Actually, successful second language learners have more effective learning strategies than unsuccessful second language learners. Sometimes comparing effective and ineffective language learners is difficult. As Skehan (1989) noted, unsuccessful learners might be lacking the verbal expression skills that are needed to perform as well as successful learners in a testing situation. According to Cohen (1998), language learning strategies include "those processes which are consciously selected by learners and which may result in action taken to enhance the learning, acquisition, or use of a second language, through the storage, retention, recall, and application of information about that language" (p. 4). Basically, learning strategies involve not only internal mental actions, but also physical actions (e.g., role play). That is, learning strategies may improve language learning related to the choice of information from input, organization, and integration of learner systems. Furthermore, directionality is an important issue with learning strategies. Successful learners may do certain things, as they have developed the prerequisite abilities to perform during the first language acquisition process. Even

though unsuccessful learners attempt similar things, they have to improve their second language skills before using these strategies (Gass & Selinker, 2001).

Various Instructional Methods in ELP

There are many different methods that have been recommended for enhancing the process of increasing English language proficiency. The approach concept in language teaching is the idea of a systematic set of teaching practices based on a particular theory of language and language learning. Theory description would include theories of what language is and how language is learned or theories of second language acquisition. However, these theories are linked to various design features of language instruction. The design characteristics have to connect to actual teaching and learning practices as observed in the learning environment where language teaching and learning take place (Rodgers, 2001).

Approach 1: Language Immersion

The language immersion approach provides English language learners with a better learning environment in which students need to learn the English language in order to do well. In language immersion courses, English language is the medium for communication and instruction as students are placed in content-area classes. In addition, the instructor is usually prepared in English language and English content and has some knowledge of the different language (Richard-Amato, 2003). This approach is consistent with teaching whole to part, centering on the language learner and making learning meaningful by creating best opportunities for social interaction and students' primary languages and cultures in the courses (Freeman & Freeman, 1998).

Approach 2: Strategopedia

“Learning to learn” is referred to as the most important topic in an instructional concentration on language learning strategies. These learning strategies include the basic level of memory trick and higher levels of cognitive and metacognitive, thinking, planning, and self-monitoring. The Strategopedia strategy is referred to teaching language learners the strategies they need so that they can learn on their own (learner training). The strategopedia strategy helps learners remember and access new English language vocabulary parts (Rodgers, 2001).

Approach 3: Communicative Approach

The communicative approach is based on the idea that the goal of learning an English language is to gain communicative competency. The learners need to have knowledge and experience with the language and possess strategies to communicate effectively. The communicative approach concentrates on the use of language in everyday circumstances, or more emphasis on the functional aspects of language and less on the formal grammatical structures (Conrad, 2001).

Essential Elements of Cooperative Learning

Cooperative learning (CL) is now widely recognized as one of the most promising practices in the field of education. According to Johnson and Johnson (1990), most teachers believe that they are implementing cooperative learning, when in fact they are missing the essence. Cooperation is much more than being physically near other students, discussing and helping or sharing material with other students in the English as a second language (ESL) classroom. “The learning together method asserts

that five basic principles are necessary for successful cooperative groups” (Johnson, Johnson & Holubec, 1993, p. 2).

Principle 1: Positive Interdependence

The first and most important element in structuring CL is positive interdependence. According to Johnson and Johnson (1990), students of all ages must perceive themselves as being linked with each other in a way that one cannot succeed unless everyone succeeds. Positive interdependence is the heart of cooperative learning; therefore, students must believe that they “sink or swim together” (Johnson & Johnson, 1994, p. 2). Within every cooperative lesson, positive goal and role interdependence is structured by group members (a) “agreeing on the answer and the strategies for solving each problem,” and (b) “fulfilling assigned role responsibilities” (Johnson, 1992, p.12).

In order to strengthen positive interdependence, joint rewards, divided resources and complementary roles may also be used. Joint rewards refer to offering students rewards for meeting certain criteria. Divided resources give each group member a part of the total information required for completing an assignment. Complementary roles refers to giving each group member different roles, such as a reader, who reads the problem aloud to the group, checker of understanding, encourager of participation, and elaborator of knowledge. Role assignments are varied and are rotated, thus giving each student opportunities to learn and practice many different social skills. With these social skills, students strengthen weaker skills, reinforce stronger skills, and learn new skills. However, new roles must be taught and modeled. Having a badge or paper nameplate for each role assigned with a description of the role is helpful. This is particularly useful when students first begin to work in learning groups. If there is no positive

interdependence, there will be no cooperation.

Principle 2: Individual Accountability

Each individual student's performance is assessed by the teacher, and the results are given back to the group and individual. The group must know who needs more assistance, support, and encouragement in completing the assignment, but also that to "hitchhike" onto the work of others is unacceptable. The purpose of CL groups is to make each member a stronger individual. The methods that use only a group grade or a group product without making each member accountable do not consistently produce achievement gains (Slavin, 1995). To ensure that each member is strengthened, students are held individually accountable to complete their share of the assignment. Common ways to structure individual accountability include the following: (a) giving an individual test to each student; (b) randomly selecting one student's product to represent the entire group; and (c) having each student explain what has been learned to a classmate (Johnson, Johnson, & Holubec, 1993, p. 4).

Principle 3: Face-To-Face Interaction

There are important cognitive activities and interpersonal dynamics that only occur when students promote each other's learning. This activity includes orally explaining how to solve problems, teaching one's knowledge to classmates, checking for understanding, discussing with each other the nature of the concepts and strategies being learned, and connecting between present and past learning. Accountability to peers, ability to influence each other's reasoning and conclusions, social modeling, social support, and interpersonal rewards all increase as the face-to-face interaction among group members increases. To obtain meaningful face-to-face interaction, the

size of the groups needs to be small, about two to six members. However, four members are best for paired work. (See Appendix B and K for classroom arrangement.) Each of these activities can be structured into group task directions and procedures. Positive interdependence creates the conditions for students to work together to promote learning interest and assist and encourage each other.

Principle 4: Social Skills

Social skills include ways students interact with each other to achieve activity or task objectives and the ways learners interact as teammates. The social skills behavior may not occur spontaneously with all students, and teaching those individuals can have a profound impact on attentiveness, spirit, and motivation (Johnson & Johnson, 1999). Cooperative learning is inherently more complex than competitive or individual learning. However, social skills must be taught to students just as purposefully and precisely as academic skills. Most students have never worked together in learning situations and thus lack the needed social skills. In addition, leadership, decision-making, trust-building, communication, and conflict-management skills enable students to interact effectively with peers from other cultures and ethnic groups.

Principle 5: Group Processing

Group processing exists when group members discuss how well goals are being achieved as well as maintaining effective working relationships. Groups need to describe what member actions are helpful and unhelpful and make decisions about what behaviors to continue or change. Second language learners must also be given the time and procedures for analyzing how learning groups are functioning and the extent to which language learners are employing social skills to help all group members.

The process includes the following: (a) enabling learning groups to focus on group maintenance; (b) facilitating the learning of social skills; (c) ensuring that members receive feedback on participation; and (d) reminding students to practice collaborative skills consistently. When difficulties in relating to each other arise, learners have to engage in group processing and identify, define, and solve the problems to work together effectively.

CL is a powerful approach to learning a second language, which is an effective pedagogy and world view (Cohen, Brody, & Sapon-Shevin, 2004). In order to effectively use CL, teachers should understand the nature of cooperation and the essential components of a well-structured collaborative lesson. However, the essential elements of CL also allow teachers to adapt to unique circumstances, needs, and learners and fine-tune when implementing CL in ESL / EFL classrooms for students of all ages.

Cooperative Learning as One Type of Instructional Strategy

CL can be defined as “a strategy for the classroom that is used to increase motivation and to provide a way for critical thinking, problem solving and to encourage collaborative social skills” (Johnson & Johnson, 1999, p. 2). Christison (1990) stated that the implementation of cooperative learning as a strategy includes “several activities for helping teachers understand group dynamics and promote peer support in the ESL classroom” (p. 18).

Strategy 1: Restructuring

A restructuring activity usually requires students to interact physically as a group. The students are given specific explanations for carrying out the teacher-assigned task. The “lineup” is a good example of a restructuring activity. Students are asked to

come to the front of the room and line up according to a specific criterion, such as their date of birth (Christison, 1990).

Strategy 2: One-Centered

This activity has to put one student in the “spotlight” for a few minutes. The activity is structured so that each student is given individual attention for a limited period of time. The one-centered activity would be a “spotlight interview,” which means all students are given a list of interview questions that can be asked. Several different students are “spotlighted” each day. If a student does not answer a particular question, that individual can say, “I pass” or “I would rather not say” (Christison, 1990).

Strategy 3: Unified Group

The unified group activity promotes cooperation in the group. Students begin to think about group goals instead of individual goals. This activity requires participation of all students, and they may not “bow out.” If someone chooses not to participate, the group will fail. A popular unified-group activity is the “strip story,” which means narrative stories with definite story lines. The text of a story is cut into strips with several lines on each strip. Students have to work together in the group to put the story back together; all information must be exchanged orally (Christison, 1990).

Strategy 4: Dyad

This is a useful and interesting activity, which gives students the opportunity to work one-on-one with other students in the ESL classroom. This activity is called “dyad” or “information gap” and uses grids and charts. Each student will be given one of the grids, which contains only some information. The task is for students to share

personal ideas and values, which means giving each other information, figuring out strategies, and then acquiring information to complete the grids (Christison, 1990).

Strategy 5: Small Group

A small-group activity is more loosely structured than a pair activity. This activity requires students to have patience, motivation, and good listening habits. Basically, the teacher takes the role of facilitator. The teacher provides students with a number of different categories, for example, things that can be folded; things to eat for breakfast, lunch or dinner; and things to read or write. The teacher then asks students to think of 10 different things to put in each category. This activity helps students develop techniques for whole-group interaction (Christison, 1990).

How CL Enhances the L2 Process and Supports L2 Theory

In the interactive classroom, the environment consists of cooperatively created goals, democratic structure, and group problem solving when concerns occur. Conflict provides opportunities for further learning, rather than frustrating teachers and students. Consequently, through CL, students become accountable, not only as individuals but also as members of a group. At the heart of the interactive learning classroom is an atmosphere of caring that is encouraging and supportive for each student (Johnson & Johnson, 1990). The teacher acts as a facilitator of learning, approaching the group when necessary. Cooperative techniques dramatically increase the amount of time for oral interaction available to each student, which may help second language learners become comfortable when engaging in conversation with native speakers. Furthermore, the quality of interaction is greatly improved.

Collaborative group work fosters purposeful, task-oriented communication.

The task to be completed or the problem to be solved is the student's main focus, but the information sharing and discussion process assists students in acquiring more of the language and refining language competence. All students take opportunities for peer group interaction on learning tasks to obtain new knowledge and apply it in future lessons. The more opportunities students have to listen, talk, practice or experience, the better the retention of new information and ideas in the ESL classroom (Johnson & Johnson, 1990). In other words, by using CL techniques in ESL classrooms, students can experience academic success and positive self-esteem. Therefore, many cooperative learning activities and approaches result in students taking responsibility for creating a real life for themselves.

Assessment of English Language Proficiency

Assessment is a continuous process that encompasses a much wider domain. Whenever a language learner responds to a question, provides a comment or tries out a new word or sentence structure, the ESL instructor subconsciously makes an assessment of the English language learner's performance or proficiency (Brown, 2004). In addition, assessment is essential for both the instructors and the English language learners. The assessment tasks are developmental in nature and allow the language learners sufficient opportunities to demonstrate what English language learners know and do not know, providing helpful feedback for both the language learners and instructors (Cohen, 1994). There are four language subskills that instructors analyze: listening, speaking, reading, and writing.

Listening Assessment

Communicative stimulus-response listening is found in a most popular style of assessment task where the language learner is presented with a stimulus conversation and then is asked to respond to a set of comprehension questions. The brief conversations are sometimes artificial rather than authentic, and the ensuing multiple-choice questions may not mirror communicative or real-life situations. But this task can create reasonably authentic stimuli. This communicative stimulus-response listening assessment focuses on certain objectives that are built into the language learner's thinking ability and can be constructed to validate an appropriate measure of field-independent listening skills: a language learner's ability to remember certain details from a conversation (Brown, 2004).

Speaking Assessment

In communicative language-teaching courses, role playing is a popular pedagogical activity. This oral production assessment (interactive speaking) is free time for language learners to be somewhat creative in learners' linguistic output. In addition, role playing allows enough rehearsal time in a low-anxiety environment so that learners can arrange what the group is going to say (Brown, 2004).

As a speaking assessment is implemented, role playing opens some windows of opportunity for language learners to use conversation that might otherwise be difficult to elicit. For example, a learner is buying a necklace from a trader in a flea market, and the learner wants to get a discount price. For this conversation, strategic and linguistic factors come into the foreground of the second language learner's oral abilities. With the instructor's guidance, this role playing technique takes learners beyond simple intensive

and responsive levels to a level of creativity and real-world complexity. The instructor has to decide beforehand the speaking assessment objectives of the role playing activity and create a scoring technique or rubric that appropriately pinpoints those objectives. The scoring presents issues in any task that elicits unpredictable responses from second language learners (Brown, 2004).

Reading Assessment

There is no doubt that one of the oldest and most common reading assessment techniques is reading a passage and answering related comprehension questions. This technique involves reading a passage for the first time and responding to questions about its meaning. A set of questions based on a 250-word passage typically covers the comprehension of these components: main idea, inferences, grammatical features, supporting ideas, vocabulary in context, and so on. In addition, these comprehension questions are consistent with strategies for effective reading, including skimming for the main idea, scanning for details, guessing word meanings from reading context, and inference. The reading comprehension questions are acquired from research on a variety of abilities demonstrated by excellent readers. This type of assessment can be scored quickly (Brown, 2004).

Writing Assessment

One common type of writing assessment is a guided question-and-answer format in which the instructor brings up a series of questions that serve as an outline of the written text. This technique involves the writing of a narrative that the instructor has already covered in class discussions to elicit a sequence of sentences. This writing task adds to the pedagogical benefit of guiding a second language learner. Guided writing

texts only need two or three paragraphs, which may be scored on an analytic scale. In addition, the guided writing is likely to serve as a method to prompt initial drafts, which can then go through editing and revising stages and discussed in following classes. In order to prompt the language learning writing ability, the instructor needs to use various guided questions to encourage the learner to write from an outline. The guided question-and-answer format helps the language learner through a logic of ideas development, which has been given a certain amount of forethought (Brown, 2004).

Theoretical Framework

Based on the review of theoretical and empirical literature, two models for second language learners are proposed for this study. These two models are second language acquisition (SLA) and cooperative learning (CL). The second language acquisition model was developed after substantial research, comparing the processes of first language acquisition theories and second language acquisition theory. The second language acquisition model refers to the process of learning another language after the learner has already become competent at a first language. Furthermore, SLA is the phrase utilized to describe the process that people experience when faced with a need to use a language other than their native language for communication (Grass & Selinker, 2001). The formation of a proposed second language acquisition model for this study is primarily from the works by Krashen (2003).

This second language acquisition model was presented either deductively or inductively through research in the ESL/EFL classroom (Conrad, 2001). In the early 1980s, Krashen developed the overall theory of second language acquisition that continues to have important implications for second language acquisition and teaching

across all levels and disciplines. This second language acquisition model includes five main hypotheses: (a) the acquisition-learning hypothesis; (b) the natural-order hypothesis; (c) the monitor hypothesis; (d) the input hypothesis; and (e) the affective-filter hypothesis (Krashen, 2003).

Cooperative learning is widely recognized as one of the most promising practices in the field of education. Cooperation is much more than being physically near other students, discussing and helping or sharing material with other students in the ESL/ EFL classroom (Johnson, Johnson & Stanne, 2000). The cooperative learning model includes five basic principles: (a) positive interdependence; (b) individual accountability; (c) face-to-face interaction; (d) social skills; and (e) group processing. Christison (1990) stated that the implementation of cooperative learning as a strategy includes five activities for helping teachers understand group dynamics and promote peer support in the ESL/EFL classroom: (a) restructuring; (b) one-centered; (c) unified group; (d) dyad; and (e) small group. The cooperative learning model guides this study by Johnson, et al. (2000).

Several language learner factors may be responsible for affecting English language acquisition. The theoretical framework includes a focus on different individual factors: (a) age differences; (b) motivation (goal, effortful behavior, and attitudes); (c) social distance and psychological distance; (d) aptitude; (e) anxiety; and (f) learning strategies (Alcon, 1998; Gass & Selinker, 2001; Walqui, 2000). These factors play an important role in English language learning and processing. According to Krashen (1987), age differences relate to the input hypothesis and the affective filter hypothesis. Children are superior in second language attainment in the long run; adults

acquire at a faster rate initially. In other words, older acquirers progress more quickly in early stages because they get more comprehensible input, whereas younger acquirers do better in the long run because of their low affective filters. Older acquirers gain more comprehensible input through their greater experience and knowledge of the world, which helps make the input that they hear and read more comprehensible and helps develop superior skills in conversational management. However, younger children actually gain what looks like simpler input with less complex grammar. For example, younger children often tied simpler vocabulary words like “here” and “there” (Krashen, 1987).

Motivational factors are related to second language acquisition hypothesis. A low affective filter of motivation should encourage the acquirer to interact with speakers of the second language out of pure interest and obtain intake. In addition, the motivated performer will not feel a threat from the other group and will be prone to engage in receptive learning (acquisition) (Krashen, 1988).

Aptitude is an important factor related directly to second language learning hypothesis. Pimsleur (1966) described that a number of intellectual and motivational factors are thought to contribute to success in English language learning, such as GPA, motivation. The language aptitude battery consists of six parts: (a) grade point average in academic areas other than foreign languages; (b) interest in learning a foreign language; (c) vocabulary-word knowledge in English; (d) language-analysis ability to reason logically in terms of a foreign language; (e) Sound-discrimination ability to learn new phonetic distinctions and recognize them in different contexts; and (f) sound-symbol association—an association of sounds with their written symbols.

Assessment is a continuous process that encompasses a much wider domain. Whenever a language learner responds to a question, provides a comment or tries out a new word or sentence structure, the ESL/EFL instructor subconsciously makes an assessment of the English language learner's performance or proficiency (Brown, 2004). There are four language subskills that instructors analyze: listening, speaking, reading, and writing (Brown, 2004). A second language acquisition model designed by the researcher depicts the relationships among this theory and variables in this study (Figure 2-1).

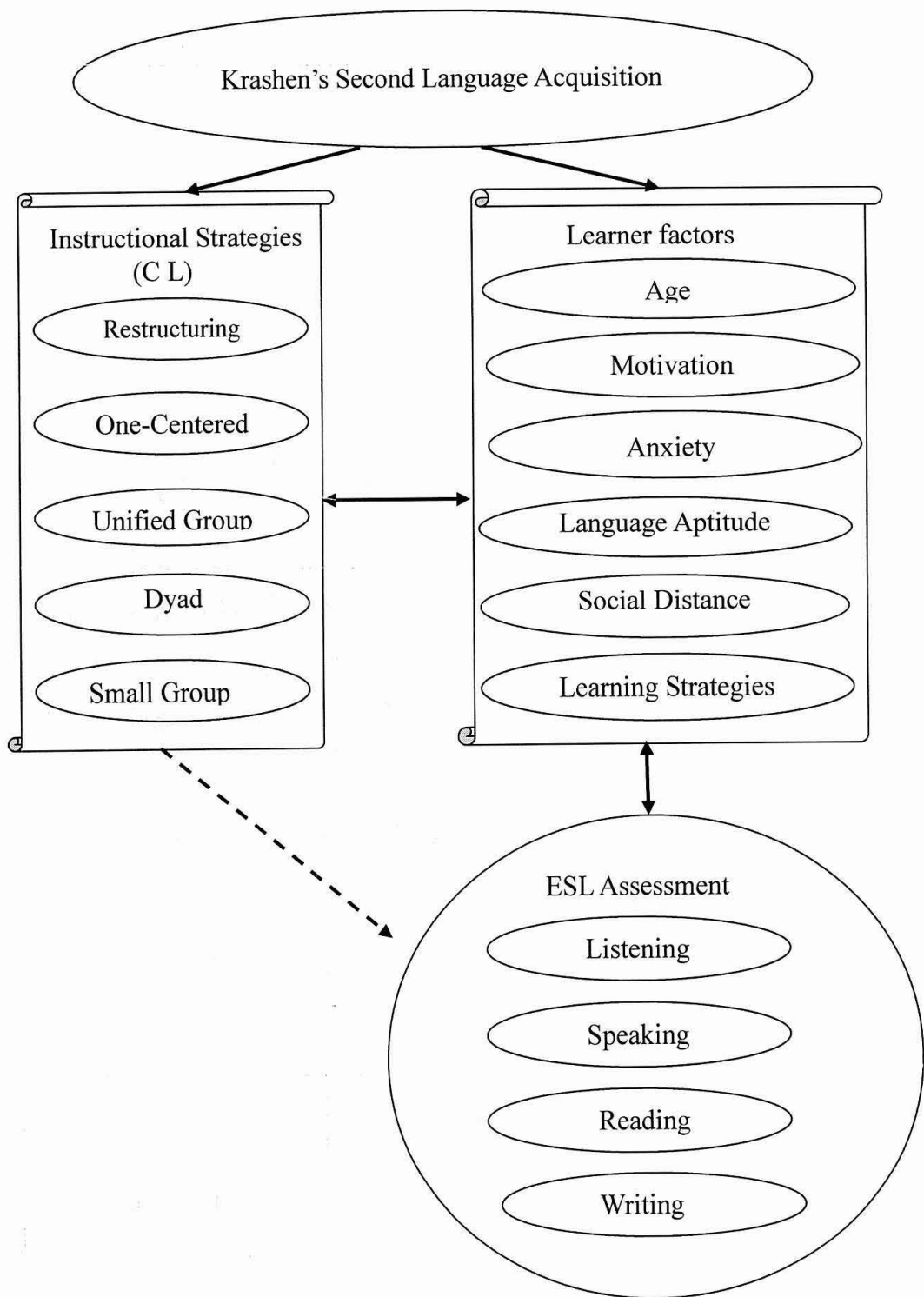


Figure 2-1. English language proficiency model of variables.

Research Questions

1. What are the learner factors of age, gender, education, years learning English, motivation, anxiety, language aptitude, social distance, and learning strategies of Taiwanese students (age 18 or older) studying English as a second language?
2. What is the frequency of participation in cooperative learning strategies of restructuring, one-centered, unified group, dyad, and small group of Taiwanese students (age 18 or older) studying English as a second language?
3. What is the English language proficiency in listening, speaking, reading, and writing of Taiwanese students (age 18 or older) studying English as a second language?

Hypotheses

The research hypotheses in the study were based on the hypothesized second language acquisition model for language learners. In this theoretical framework, several research hypotheses were developed.

H₁: Learner factors of age, gender, education, years learning English, motivation, anxiety, language aptitude, social distance, and learning strategies are significant explanatory variables of English language proficiency for Taiwanese students (age 18 or above).

H_{1a}: Learner factors of age, gender, education, years learning English, motivation, anxiety, language aptitude, social distance, and learning strategies are significant explanatory variables of English language proficiency in listening for Taiwanese students (age 18 or older).

- H_{1b}: Learner factors of age, gender, education, years learning English, motivation, anxiety, language aptitude, social distance, and learning strategies are significant explanatory variables of English language proficiency in speaking for Taiwanese students (age 18 or older).
- H_{1c}: Learner factors of age, gender, education, years learning English, motivation, anxiety, language aptitude, social distance, and learning strategies are significant explanatory variables of English language proficiency in reading for Taiwanese students (age 18 or older).
- H_{1d}: Learner factors of age, gender, education, years learning English, motivation, anxiety, language aptitude, social distance, and learning strategies are significant explanatory variables of English language proficiency in writing for Taiwanese students (age 18 or older).
- H₂: The frequency of participation in cooperative learning strategies of restructuring, one-centered, unified group, dyad, and small group are significant explanatory variables of English language proficiency for Taiwanese students (age 18 or older).
- H_{2a}: The frequency of participation in cooperative learning strategies of restructuring, one-centered, unified group, dyad, and small group are significant explanatory variables of English language proficiency in listening for Taiwanese students (age 18 or older).
- H_{2b}: The frequency of participation in cooperative learning strategies of restructuring, one-centered, unified group, dyad, and small group are

significant explanatory variables of English language proficiency in speaking for Taiwanese students (age 18 or older).

H_{2c}: The frequency of participation in cooperative learning strategies of restructuring, one-centered, unified group, dyad, and small group are significant explanatory variables of English language proficiency in reading for Taiwanese students (age 18 or older).

H_{2d}: The frequency of participation in cooperative learning strategies of restructuring, one-centered, unified group, dyad, and small group are significant explanatory variables of English language proficiency in writing for Taiwanese students (age 18 or older).

H₃: Learner factors (age, gender, education, years learning English, motivation, anxiety, language aptitude, social distance, and learning strategies), and frequency of participation in cooperative learning strategies (restructuring, one-centered, unified group, dyad, and small group) are significant explanatory variables of English language proficiency for Taiwanese students (age 18 or older).

H_{3a}: Learner factors (age, gender, education, years learning English, motivation, anxiety, language aptitude, social distance, and learning strategies), and frequency of participation in cooperative learning strategies (restructuring, one-centered, unified group, dyad, and small group) are significant explanatory variables of English language proficiency in listening for Taiwanese students (age 18 or older).

H_{3b}: Learner factors (age, gender, education, years learning English, motivation, anxiety, language aptitude, social distance, and learning strategies), and frequency of participation in cooperative learning strategies (restructuring, one-centered, unified group, dyad, and small group) are significant explanatory variables of English language proficiency in speaking for Taiwanese students (age 18 or older).

H_{3c}: Learner factors (age, gender, education, years learning English, motivation, anxiety, language aptitude, social distance, and learning strategies), and frequency of participation in cooperative learning strategies (restructuring, one-centered, unified group, dyad, and small group) are significant explanatory variables of English language proficiency in reading for Taiwanese students (age 18 or older).

H_{3d}: Learner factors (age, gender, education, years learning English, motivation, anxiety, language aptitude, social distance, and learning strategies), and frequency of participation in cooperative learning strategies (restructuring, one-centered, unified group, dyad, and small group) are significant explanatory variables of English language proficiency in writing for Taiwanese students (age 18 or older).

Chapter II presents an in-depth review of English language acquisition, learner factors, various instructional strategies in teaching ELP, cooperative learning of instructional strategy, and assessment of ELP. This chapter provides critical analyses of related theoretical and empirical literature about English language proficiency difference and learner factors. SLA model, research questions, and hypotheses are also presented in

this chapter. Chapter III includes a research methodology of the research design, population, sampling plan and setting, instrumentation, ethical considerations, procedures of data collection, methods of data analysis, and evaluation of research methods.

CHAPTER III

RESEARCH METHODOLOGY

This chapter presents the research methods that were used in this study about the relationships between frequency of participation in cooperative learning strategies, learner factors, and English language proficiency. The chapter also presents a discussion of the research design used in the study, the population, the sampling plan and setting, instrumentation, ethical considerations, procedures of data collection, methods of data analysis, and evaluation of research methods. The instrument design section includes the scales that were utilized to measure English language proficiency as well as discussion of the scales were utilized to measure the other constructs within the conceptual model. Data collection procedures include all sequential steps of data collection in an ethical manner. The data analysis section plan to assess construct validity for all measures is addressed in this study. Finally, the evaluation of the research methodology regarding internal and external validity is represented.

Research Design

This quantitative, nonexperimental, correlational (explanatory) survey research design was used to answer the research questions about English language proficiency for Taiwanese students and to test the relationships between cooperative learning strategies, learner factors, and the acquisition of English language proficiency (four language self-reported assessment skills). The survey was conducted online to collect data.

The dependent variable of English language proficiency was measured using four skills assessment for Taiwanese students (Appendix I). The independent variables in this study are the following: learner factors of age, gender, education, years learning English,

motivation, anxiety, language aptitude, social distance; and cooperative learning strategies. Demographic variables of age, gender, education, years of experience learning English were measured by an online survey developed by the researcher (Socio-Demography Profile) (Appendix I). The learner factor of motivation was measured by an online survey (Appendix I). The learner factor of anxiety was measured by an online survey (Appendix I). The learner factor of language aptitude was measured by an online survey (Appendix I). The learner factor of social distance was measured by an online survey (Appendix I). The learner factor of social distance was measured by an online survey (Appendix I). Frequency of participation in cooperative learning strategies (restructuring, one-centered, unified group, dyad, and small group strategies) was measured by an online survey (Appendix I).

The sample consisted of Taiwanese English language learners located in Taiwan. Descriptive statistics (frequency distributions and measures of central tendency) was used to answer the research questions. Several multiple regression analyses were used to test each of the hypotheses.

Population and Sampling Plan

Target Population

According to the Taiwan Ministry of Education Department of Statistics (2006), there are 75 schools in the higher education system including universities and institutes of technology that are public and private. The target population is the whole group that researchers are interested in and wish to draw conclusions (Trochim, 2005). In this study, the target population included all undergraduates who are second language learners attending one private institute of technology, the Fortune Institute of Technology, located

in Kaohsiung, Taiwan. During the 2005-2006 year, this institution had 3420 undergraduate students: 2086 male and 1334 female. This group constitutes the target population. Prior to attending the Fortune Institute of Technology, or during enrollment, each undergraduate student had studied English for at least one year. There are 18 departments and 284 instructors employed at the school (Taiwan Ministry of Education Department of Statistics, 2006).

Accessible Population

The accessible population is the same as the target population. The accessible population of this study was second language learners (undergraduates) attending the daytime Fortune Institute of Technology. Prior to attending the school, or during enrollment, each undergraduate student had studied English for at least one year. English courses are also required in order to graduate. To obtain the information from the entire daytime undergraduates, the researcher requested permission from Fortune Institute of Technology. The school's entire daytime undergraduate student body constituted the sampling frame.

Convenience Sampling Plan

The sample of this study was selected from the entire accessible population of 3420 undergraduate students attending the daytime Fortune Institute of Technology, using convenience sampling, a nonprobability sampling plan. The use of convenience sampling is used in exploratory research in which the researcher is interested in getting a gross estimate of the result without spending the cost or time required to select a random sample. The strengths of the convenience sampling are its ease of use and convenience.

Another advantage of the convenience sampling technique is that the population is homogeneous. This technique can deliver accurate results.

The process of convenience sampling of subjects selected undergraduate students who were attending the daytime Fortune Institute of Technology. The students were invited to participate in this study through an e-mail invitation, with a link to an anonymous online survey. In addition, the researcher asked instructors and undergraduate students to assist in disseminating this survey information to other undergraduate students who did not get this e-mail or who were unaware of this survey information. The final producing sampling was self-selected, consisting of those who agreed to participate in this study.

The data collection process first required the researcher to obtain permission from the Fortune Institute of Technology to use the accessible population of the entire undergraduate, daytime student body. The Fortune Institute of Technology assisted the researcher by sending a BCC e-mail format to the entire accessible population that included the invitation to complete the online survey and the link to the online survey. If the subject agreed to participate in the online survey, the subject clicked the link of the online survey provided in the e-mail invitation. This took or led the participant to a page with the consent form. After the participants reviewed the consent form and agreed to participate, they clicked, "Yes, I agree to participate in this study" to get started filling in the online survey. The estimated time for respondents to complete the online survey was approximately 10 minutes. The data collection completion was one month after the date it began and no longer than one year from the date of IRB approval. The researcher checked this particular Web site (SurveyMonkey.com) daily to gather responses from

participants over the span of study. This researcher recruited approximately 396 people to participate in this study. The techniques for data analysis included descriptive statistics and multiple regression analysis

Eligibility Criteria and Exclusion Criteria

The study focused on second language learners attending the daytime Fortune Institute of Technology. Some criteria for eligibility and exclusion were established. The eligibility criteria of the sample were the following:

1. Second language learners who were 18 years old and older,
2. Second language learners who were able to listen, speak, read, and write English,
3. Second language learners who were studying at the daytime Fortune Institute of Technology of Kaohsiung in Taiwan,
4. Second language learners who studied English for at least one year,
5. Second language learners who agreed to participate in this study and complete an online survey (specify online), and
6. Second language learners who were living in Taiwan for the past six months.

The exclusion criteria of the sample were:

1. Second language learners who were not 18 years old or older,
2. Second language learners who were not able to listen, speak, read, and write English,
3. Second language learners who were not studying at the daytime Fortune Institute of Technology of Kaohsiung in Taiwan,
4. Second language learners who did not study English for at least one year,

5. Second language learners who did not agree to participate in this study or complete an online survey (specify online), and
6. Second language learners who were not living in Taiwan for the past six months.

Instrumentation

A seven-part online, self-reporting survey was used in this study to measure the variables. The first six parts measured the independent variables in this study, and Part 7 measured the dependent variable. Part 1 *Socio-Demographic Profile*, was developed by the researcher. Part 2 Motivation, was measured by the *Motivational Intensity Subscale* of the *Attitude and Motivation Test Battery* developed by Gardner (1985). Part 3 Anxiety, was measured by the *Foreign Language Anxiety of University Student*, developed by Horwitz et al. (1986). Part 4 Language Aptitude, was measured by the *Pimsleur Language Aptitude Battery (PLAB)* developed by Pimsleur (1966). Part 5 Social Distance, was measured by the *Social Distance Scale* developed by Sherman & Burgess (1985). Part 6 Frequency of Participation in Cooperative Learning, was measured by the *Frequency of Participation in Cooperative Learning Scale* developed by the researcher. Part 7 English Language Acquisition (Listening, speaking, reading, writing), was measured by Greenfield (2003). The survey consisted of a total of 72 questions. It took approximately 10 minutes to complete the online survey (Appendix I).

Part 1. Socio-Demographic Profile

The *Socio-Demographic Profile*, developed by the researcher, included four demographic questions that measure gender, age, education category, and years of experience learning English. The purpose of the socio-demographic questions was to

identify the respondents' demographic characteristics. All questions in Part 1 are multiple choice questions.

Part 2. Motivation

Description

Motivation was measured by the Motivational Intensity subscale of the *Attitude/Motivation Test Battery* developed by Gardner (1985); it consisted of 10 self-report, multiple-choice items that were designed to measure the motivational intensity of second language learners to learn English. The response categories were in random order, with a score of 1, 2, or 3 assigned to each response. A higher score represents a higher degree of effort by the language learner in acquiring the English language. The items of the Motivation Intensity of the *Attitude/Motivation Test* are presented in Table 3-1.

Table 3-1

Items of the Motivational Intensity of the Attitude/Motivation Test (AMT)

Indicators	Items
MI01	I actively think about what I have learned in my English class
MI02	If English were not taught in school
MI03	When I have a problem understanding something we are learning in English class
MI04	When it comes to English homework
MI05	Considering how I study English
MI06	If my teacher wanted someone to do an extra English assignment
MI07	After I get my English assignment back
MI08	When I am in English class
MI09	If there were a local English T. V. station
MI10	When I hear an English song on the radio

Note. The Motivation Intensity scale is from "The Attitude/Motivation Test Battery: Technical Report." by R. C. Gardner, 1985, University of Western Ontario. Copyright 1985 by University of Western Ontario. Used with permission of the first author.

Reliability

Gardner (1985) estimated internal consistency using the Cronbach's coefficient (α) as an estimate of reliability when he developed the *Attitude/Motivation Test*. The Cronbach coefficient (α) was except Parental Encouragement for a total of 32 in the sample. Median internal consistency estimates of .91 and .89 and median six week test/retest reliability of .79 were estimated. The median of the 162 values showed was .61, with 84% of the coefficients exceeding .50. Therefore, the 26 values which were less than .50, the majority were due to two scales, Instrumental Orientation and Attitudes

Toward European French People (Gardner, 1985). The reliability coefficients demonstrated a reasonable level of reliability. In this study the researcher provided reliability estimates of internal consistency using coefficient alpha.

Validity

Content validity is established (Gardner, 1985). *The Attitude/Motivation Test* was expected to demonstrate a high correlation with the various criteria. It would be predicted that some scales would relate more highly to some criteria than others. The total of the attitudinal/motivational intensity factors provides the most comprehensive assessment and should be more stable over all criteria (Gardner, 1985). Gardner (1985) pointed out considerable data relevant to the convergent validity of the scales and composite indices. The Motivational Intensity subscale correlate meaningfully with indices of achievement in the second language, continuance in second language study, participation in inter-ethnic contact situations, and specific behaviors in the second language classroom. In this study, the researcher established convergent validity (correlation with other measures used in the study).

Part 3. Anxiety

Description

Anxiety was measured by the *Foreign Language Classroom Anxiety Scale (FLCAS)* developed by Horwitz, Horwitz, and Cope (1986). The scale has 33 items that measure the levels of anxiety experienced by language learners. The questionnaire was self-report measured. Each item was measured on a 5-point scale, ranging from strongly disagree (scale point 1) to strongly agree (scale point 5), with the middle point being neutral (scale point 3). The score range was 5 to 25 points; the total score of 25 points

would indicate higher anxiety, and lower total score of 5 points would indicate less anxiety. The scale captures the specific essence of foreign language anxiety in a classroom setting and provides researchers with a standard measure (Dereshiwsky & Casado, 2001). The items of the Foreign Language Classroom Anxiety Scale are presented in Table 3-2. The dimensions (subscales) of this scale include the following:

Communication Apprehension	Q9+Q27+Q18+Q4+Q29+Q1+ Q3+Q13+Q14+Q20+Q24+Q33
Fear of Negative Evaluation	Q7+Q23+Q31+Q15+ Q19+Q2+Q8+Q21
General Feeling of Anxiety	Q5+Q6+Q10+Q11+Q12+Q16+ Q17+Q22+Q25+Q26+Q28+Q30+Q32

Table 3-2

Items of the Foreign Language Classroom Anxiety Scale (FLCAS)

Indicators	Items
FLCAS01	I never feel quite sure of myself when I am speaking in my foreign language class.
FLCAS02	I don't worry about making mistakes in language class.
FLCAS03	I tremble when I know that I'm going to be called on in language class.
FLCAS04	It frightens me when I don't understand what the teacher is saying in the foreign language.
FLCAS05	It wouldn't bother me at all to take more foreign language classes.
FLCAS06	During language class, I find myself thinking about things that have nothing to do with the course.
FLCAS07	I keep thinking that the other students are better at languages than I am.
FLCAS08	I am usually at ease during tests in my language class.
FLCAS09	I start to panic when I have to speak without preparation in language class.
FLCAS10	I worry about the consequences of failing my foreign language class.
FLCAS11	I don't understand why some people get so upset over foreign language classes.
FLCAS12	In language class, I can get so nervous I forget things I know.
FLCAS13	It embarrasses me to volunteer answers in my language class.
FLCAS14	I would not be nervous speaking in the foreign language with native speakers.
FLCAS15	I get upset when I don't understand what the teacher is correcting.
FLCAS16	Even if I am well prepared for language class, I feel anxious about it.
FLCAS17	I often feel like not going to my language class.

Table 3-2 (continued)

Indicators	Items
FLCAS18	I feel confident when I speak in foreign language class.
FLCAS19	I am afraid that my language teacher is ready to correct every mistake I make.
FLCAS20	I can feel my heart pounding when I'm going to be called on in language class.
FLCAS21	The more I study for a language test, the more confused I get.
FLCAS22	I don't feel pressure to prepare very well for language class.
FLCAS23	I always feel that the other students speak the language better than I do.
FLCAS24	I feel very self-conscious about speaking the foreign language in front of other students.
FLCAS25	Language class moves so quickly I worry about getting left behind.
FLCAS26	I feel more tense and nervous in my language class than in my other class.
FLCAS27	I get nervous and confused when I am speaking in my language class.
FLCAS28	When I'm on my way to language class, I feel very sure and relaxed.
FLCAS29	I get nervous when I don't understand every word the language teacher says.
FLCAS30	I feel overwhelmed by the number of rules you have to learn to speak a foreign language.
FLCAS31	I am afraid that the other students will laugh at me when I speak the foreign language.
FLCAS32	I would probably feel comfortable around native speakers of the foreign language.
FLCAS33	I get nervous when the language teacher asks questions which I haven't prepared in advance.

Note. The scale is from "FLCAS: A Multiple-item Scale for Measuring Levels of Anxiety," by E. K. Horwitz, M. B. Horwitz, and J. Cope, 1986, *The Modern Language Journal*, 70 (2), pp. 125-132. Copyright 1986 by The Modern Language Journal. Used with permission of the first author

Reliability

The internal consistency as an estimate of reliability, resulted in an alpha coefficient of .93 with all items producing significant corrected item-total scale corrections. Test-retest over eight weeks yielded an $r = .83$ ($P < .001$) (Horwitz et al., 1986). Anxiety scores lower than 3.0 would indicate some level of anxiety for questions 1, 3, 4, 6, 7, 9, 10, 12, 13, 15, 16, 17, 19, 20, 21, 23, 24, 25, 26, 27, 29, 30, 31, 33. Anxiety scores higher than 3.0 would indicate some level of anxiety for questions 2, 5, 8, 11, 14, 18, 22, 28, 32. The results suggested that the scale had high internal consistency, and provided good estimates of reliability. In this study the researcher provided reliability estimates of internal consistency using coefficient alpha.

Validity

Content validity was established. The descriptive research was the survey method. The data obtained from the survey were assessed by one-way analysis of variance (ANOVA) to determine whether the means of each question between the two groups were significantly different at a 0.05 probability level in five questions posed (3, 5, 12, 16, 19), when the perceptions on the other 28 questions were statistically similar. In this study, the researcher established convergent validity (correlation with other measures used in the study).

Part 4. Language Aptitude

Description

Language aptitude was measured by six parts of the *Pimsleur Language Aptitude Battery (PLAB)*, which was designed to help English language instructors seeking ways of determining with reasonable accuracy how well a learner will do in the field of second languages (Pimsleur, 1966). The purpose of this test was used for selection, placement, and guidance. Pimsleur (1966) described that of a number of intellectual and motivational factors thought to contribute to success in English language learning, four different assessment factors were verified to be significantly related to English language learning: grade point average, motivation, verbal ability, and auditory ability. The language aptitude battery consists of six parts: grade point average in academic areas other than foreign languages, interest in learning a foreign language, vocabulary, language analysis, sound discrimination, and sound-symbol association. Part 1 tests how well the language learner did in grade point average. Part 2 tests how motivated the language learner was in studying an English language. Part 3 tests the learner's word knowledge in English. Part 4 requires the ability to learn reason logically in terms of an English language. Part 5 requires the learner to differentiate between pitch, orality, and nasality in spoken words in an unfamiliar language. Part 6 requires the ability in an association of sounds with their written symbols. In this study, the researcher used 10 multiple-choice questions from Part 3 of the PLAB to test the second-language learner. The score was 10 points on each question. The items of the *Pimsleur Language Aptitude Battery* are presented in Table 3-3.

Table 3-3

Items of the Pimsleur Language Aptitude Battery (PLAB)

Indicators	Items
PLAB01	fruitless (a) intentional (b) successful (c) profitable (d) ineffectual
PLAB02	jovial (a) somber (b) merry (c) satisfied (d) fatigued
PLAB03	vigorous (a) week (b) sickly (c) strong (d) vigilant
PLAB04	malicious (a) thirsty (b) beneficent (c) wicked (d) charitable
PLAB05	vivacious (a) lively (b) pretty (c) docile (d) glum
PLAB06	loquacious (a) sweet (b) beautiful (c) tall (d) talkative
PLAB07	hilarious (a) lengthy (b) dull (c) boisterous (d) extemporaneous

Table 3-3 (continued)

Indicators	Items
PLAB08	smug (a) self-satisfied (b) friendly (c) uncertain (d) unhappy
PLAB09	ludicrous (a) detailed (b) absurd (c) lengthy (d) brilliant
PLAB10	rebuked (a) promoted (b) scolded (c) praised (d) retarded

Note. The scale is from "PLAB: A Multiple-item Scale for Predicting Student Success in Foreign Language Learning," by P. Pimsleur, 1966, Second Language Testing, Inc. Copyright 1986 by Second Language Testing, Inc. Used with permission of Second Language Testing, Inc.

Reliability

The internal consistency reliability coefficients were estimated using Cronbach's alpha (α) for Parts 3 through 6 (vocabulary, language analysis, sound discrimination, and sound-symbol association) of PLAB, ranging from .85, .89, and .89 for three groups of samples, respectively (Pimsleur, 1966). The results indicated that the battery provided good estimates of reliability. The researcher plan provided reliability estimates of internal consistency using coefficient alpha.

Validity

Four factors relating to success in English language learning were identified, thus provides evidence of construct validity (Pimsleur, 1966). Predictive validity used

Pearson product-moment correlation coefficients ranging from .44 to .79. Concurrent validity indicated correlations between the PLAB and a reading comprehension test ranged from .25 to .72. In addition, the concurrent validity also indicated correlations between the PLAB and a listening comprehension test ranged from .39 to .78. The researcher plans to provide estimates of convergent validity (correlation with other measures used in the study).

Part 5. Social Distance

Description

The researcher measured social distance by adapting a sociometric rating scale developed by the Horace Mann-Lincoln Institute of School Experimentation, and is entitled the *Classroom Social Distance Scale* (Sherman & Burgess, 1985). This scale was designed to identify how the second language learners maintain their classroom social (group) distance. Intervention using a variety of social skills training procedures can be helpful in changing the classroom climate. Work with individual learners may sometimes be required. Work with the whole group is also sometimes advisable. This scale included five questions, adapted from Sherman and Burgess (1985). It was scored on a five-point Likert rating scale, ranging from strongly disagree (scale point 1) to strongly agree (scale point 5). The score range was 5 to 25 points; the total scores of 25 points would indicate greater social distance is desired and lower total scores of 5 points would indicate less social distance is desired. The items of the *Classroom Social Distance Scale* are presented in Table 3-4.

Table 3-4

Items of the Classroom Social Distance Scale

Indicators	Items
DISTANCE1	I would like to have a foreigner (native speaker) as one of my best friends.
DISTANCE2	I would like to have a foreigner (native speaker) in my group but not as a close friend.
DISTANCE3	I would like to be with a foreigner (native speaker) once in awhile but not often or for long at a time.
DISTANCE4	I don't mind a foreigner (native speaker) being in our room, but I don't want to have anything to do with a foreigner.
DISTANCE5	I wish the foreigner (native speaker) wasn't in our room.

Note. The scale is from "Classroom Social Distance Scale for Assessing Learners Maintain Their Classroom Social Status," by L.W. Sherman and D.E. Burgess, 1985, *Perceptual and Motor Skills*, 61, pp. 1223-1233. Copyright 1985 by Perceptual and Motor Skills. Used with permission of the first author.

Reliability

There was no estimate of reliability since this was a new scale. The researcher provided estimates of internal consistency reliability using coefficient alpha.

Validity

Content validity was established when five questions were selected to identify how the learners maintain their classroom social status. The researcher plans to provide estimates of convergent validity (correlation with other measures used in the study).

Part 6. Frequency of Participation in Cooperative Learning

Description

Frequency of participation in cooperative learning was measured by the *Frequency of Participation in Cooperative Learning Scale* developed by the researcher. This scale included five questions that were scored on a five-point rating scale, ranging from (1) never, (2) at least once a semester, (3) at least once a month, (4) at least once a week, and (5) every class. These responses categories were adapted from Brawner and Felder (2001). The score range was 5 to 25 points, where the higher the score the greater the higher frequency of participation in cooperative learning activity; and, the lower the score the lower the frequency of participation in cooperative learning activity. The items of the Frequency of Participation in Cooperative Learning Scale are presented in Table 3-5.

Table 3-5

Items of the Frequency of Participation in Cooperative Learning Scale

Indicators	Items
CL1	Restructuring
CL2	One-Centered
CL3	Unified Group
CL4	Dyad
CL5	Small Group

Note. The scale of responses categories is from "Frequency of Use of Instructor-centered Teaching Techniques for Assessing How Frequently Use Certain Teaching Techniques," by C. E. Brawner and R.M. Felder, 2001, Southeastern University and College Coalition for Engineering Education, pp. 19-39. Copyright 2001 by Catherine E. Brawner and Richard M. Felder. Used with permission of the first author.

Reliability

There was no estimate of reliability since this was a new scale. The researcher provided estimates of internal consistency reliability using coefficient alpha.

Validity

Content validity was established when the selected items from the literature have a panel of judges familiar with cooperative learning identify the items that the researcher selected. In addition, the researcher established convergent validity (correlation with other measures used in the study).

Part 7. English Language Proficiency (Listening, Speaking, Reading, Writing)

Description

English language proficiency (listening, speaking, reading, and writing) was measured by *Self-Reported Learning of the Four Language Skills*, developed by Greenfield (2003). This was a four-item, four-point, self-report improvement rating scale where higher scores were associated with greater improvement. The score range was 4 to 16 points from: (1) have not improved, (2) have improved a little, (3) have moderately improved, and (4) have improved very much (Greenfield, 2003). The items of the Four (Listening, Speaking, Reading, Writing) Skills Assessment Scale are presented in Table 3-6.

Table 3-6

Items of the Four (Listening, Speaking, Reading, Writing) Skills Assessment Scale

Indicators	Items
ASSESSMENT1	I think my English listening skills (1) Have not improved (2) Have improved a little (3) Have moderately improved (4) Have improved very much
ASSESSMENT2	I think my English speaking skills (1) Have not improved (2) Have improved a little (3) Have moderately improved (4) Have improved very much
ASSESSMENT3	I think my English reading skills (1) Have not improved (2) Have improved a little (3) Have moderately improved (4) Have improved very much
ASSESSMENT4	I think my English writing skills (1) Have not improved (2) Have improved a little (3) Have moderately improved (4) Have improved very much

Note. The scale is from "Learning of the Four Language Skills," by R. Greenfield, 2003, *Language Learning & Technology*, 7 (1), pp. 46-70. Copyright 2003 by Language Learning & Technology. Used with permission of the first author.

Reliability

The scale gave a reliability coefficient (Cronbach's alpha) with a value. The instrument established internal consistency with alpha ranging are from .7381 to .7741. The researcher provided estimates of internal consistency reliability using coefficient alpha.

Validity

Content validity was established when the listening, speaking, reading, and writing four variables were selected to identify the English language proficiency. In addition, the researcher established convergent validity during this study, in correlation with other measures used in the study.

Procedures: Ethical Considerations and Data Collection Methods

The researcher obtained permission from the Fortune Institute of Technology of Kaohsiung in Taiwan, to use the accessible population of the entire daytime undergraduate students who were second language learners (Appendix C). The researcher obtained author permission to use scales adopted in this study (Appendix L to Q). An application for the IRB was submitted. A full board review was necessary by the IRB, because this study was conducted in a foreign country. For the entire daytime undergraduates who are attending the Fortune Institute of Technology, the informed consent was translated from English into Chinese (Appendix E). The certification of translation letter is provided (Appendix G). An online survey was created and posted on a Web site. The Web site contained consent information, purpose, procedure, possible risks, possible benefits, assurance of anonymity, access to consent form, instructions, and survey instrument. The informed consent was available in both Chinese and English languages. The Web site was not accessible until the study was approved by the Lynn University Institutional Review Board (IRB). The date of accessibility was December 6, 2006.

Upon receiving approval from the Lynn University IRB (Appendix D), the Fortune Institute of Technology assisted the researcher by sending the e-mail invitation to

the entire accessible population (Appendix J). After the invitation e-mail, if the subject agreed to participate in the online survey, the subject clicked the link of the online survey provided in the e-mail invitation. This took the participant to a page with the consent form (Appendix F). If after reviewing the consent form the participants agreed to participate, they would click “Yes, I agree to participate in this study” to get started filling in the online survey and data collection would begin. The Web site did not track the IP address of participants or any other individual identification information.

The following process was used to send an e-mail to the entire accessible population (Fortune Institute of Technology) of daytime undergraduate students who are second language learners:

- a. Upon receiving approval from the Lynn University Institutional Review Board, the Fortune Institute of Technology helped the researcher send the invitation e-mail. This e-mail contained the link to the consent form and online survey.
- b. The e-mail sent a BCC format, not as an e-mail attachment, to prevent recipients’ mail servers from affecting any viruses or blocking e-mails
- c. If the subject agreed to participate in the online survey, the subject would click the link of the online survey provided in the e-mail invitation. This took the participant to a page with the consent form. If after reviewing the consent form, and the participants agreed to participate, they would click the “Yes, I agree to participate in this study” to get started filling in the online survey.
- d. The estimated time for respondents to complete the online survey was approximately 10 minutes.
- e. The respondents submitted the survey by clicking a submit button after

completing the survey.

- f. The researcher checked this particular Web site (SurveyMonkey.com) daily to gather responses from participants over the span of study.
- g. Participation in this study was voluntary and all the responses were reported as a group. Therefore, the researcher did not know who was participating in the survey and who was not. The participants were protected and were anonymous to the researcher.

The data collection start date was the date after this study was approved by the IRB (December 6, 2006), and the data collection completion was one month (January 5, 2007) after the date for starting and no longer than one year from the date of IRB approval (Appendix H). The online questionnaires were removed at 11:59 p.m. eastern time on the last day of data collection (January 5, 2007). At completing data collection, IRB Form 8 (termination of study) submitted to the Lynn University Institutional Review Board. Data were analyzed by using SPSS 13.0. The data were kept as confidential information and were stored electronically on password-protected computer systems and may not be disclosed unless required by law or regulation. The data will be destroyed after five years. The IRB will be notified at the end of the study.

Method of Data Analysis

The data collected from the online survey was analyzed using the statistical software program of Statistical Package for Social Sciences (SPSS) for Windows version 13.0. The methods of data analysis included descriptive statistics and multiple regression analysis. Multiple regression analysis was used to answer the research questions and test the hypotheses.

Descriptive Statistics

Descriptive statistics provided the simple summaries about the sample and the measures. In addition, descriptive statistics were also used to present quantitative descriptions in a manageable form (Trochim, 2005). Descriptive statistics are designed to examine the demographic characteristics and the sample of Taiwanese undergraduate students who are second language learners. It assisted the researcher in understanding the basic features of the data (e.g., frequency distributions, variability, and measures of central tendency) in this study.

When the data were collected, the researcher ran the simple descriptive statistics by using the statistical software program of SPSS, to interpret the validity on data in this study. At first, the researcher checked the frequency distribution of discrete variables (e.g., gender and level of education). After, the frequency distribution of continuous variables were checked (e.g., age, level of education, and years of experience learning English). The researcher depicted the frequency distribution in a graph as a histogram or bar chart.

1. Frequency distributions: The frequency distribution is a list of the values that is summarizing discrete data by counting the number of observations falling into each category. This number associated with each category is called the frequency. The collection of frequencies over all categories is giving the frequency distribution of that variable (George & Mallery, 2006).

2. Measures of central tendency

The measure of central tendency is a number which indicates the center of the distribution of data values. There are three main measures of estimates of central tendency: mean, median, and mode (George & Mallery, 2006).

- a. Mean: The mean is the average value of a data set, which is the most widely used measure of central tendency.
 - b. Median: The median is the middle point of a distribution, which is most easily estimated by sorting the data in the data set from smallest to largest.
 - c. Mode: The mode is the most frequently occurring score in a data set.
3. Measures of variability
- a. Standard deviation: The standard deviation is the most commonly used measure of variability around the mean of a distribution. Supposing the data are from an approximately normally distributed population, then 68.2% of the values are falling within 1 standard deviation of the mean, 95.4% of the values are falling within 2 standard deviations of the mean, and 99.7% of the values are falling within 3 standard deviations of the mean (George & Mallery, 2006).
 - b. Variance: The variance is a summary of how spread out the data values are.

Multiple Regression Analysis

The general purpose of multiple regression is used to account for the relationship between several independent variables and a dependent variable. Garson (2005) defined the multiple regression analysis as a form of statistical analysis that seeks the equation representing the two or more independent variables on a single dependent variable. In this study the multiple regression equation takes the form as below:

$$Y = b(X_1 + X_2 + \dots + X_7) + c$$

Where Y = English language proficiency (Dependent variable)

b = regression coefficients for the corresponding x (independent) terms

X_1 = Age (Independent variable)

X_2 = Gender (Independent variable)

X_3 = Motivation (Independent variable)

X_4 = Anxiety (Independent variable)

X_5 = Language Aptitude (Independent variable)

X_6 = Social distance (Independent variable)

X_7 = Frequency of participation in cooperative learning (Independent variable)

c = Constant

The multiple regressions analysis displayed the results of analysis in the SPSS statistical software as follows:

1. R^2 : The R^2 called multiple correlation that indicates the extent of the relationship between the dependent variable and independent variables. The R^2 ranges from 0.0 (no relationship) to 1.0, showing that 100% the variance of the dependent variable is explained by the set of independent variables.
2. F statistic: The F statistic presents the statistical probability that the relationship between the dependent variable and independent variables could have happened by chance.
3. Beta weights: The Beta weights are the regression coefficients for standardized data. The Beta weight presents the unique effect of each independent variable on the dependent variable. In addition, the Beta weight

also presents the direction and the strength of the relationship between the dependent variable and independent variables.

4. *t* statistic: The *t* statistic presents the level of statistical probability of the relationship between the dependent variable and each independent variable.

Research Questions

To answer research questions 1-3, about age, gender, education, years learning English, motivation, anxiety, language aptitude, social distance, learning strategies, frequency of participation in cooperative learning strategies, and English language acquisition proficiency in listening, speaking, reading, and writing of Taiwanese students, descriptive statistics was employed. Frequency distributions, variability, and measures of central tendency were reported.

Hypotheses Testing

Three hypotheses and related subhypotheses were tested using multiple regression, with SPSS for Windows version 13.0 multiple regression to test the relationship between learner factors, cooperative learning strategies, and English language proficiency.

To test Hypothesis 1, that learner factors of age, gender, education, years learning English, motivation, anxiety, language aptitude, social distance, and learning strategies are significant explanatory variables of English language acquisition proficiency for Taiwanese students (age 18 or older), five separate multiple regression analyses were performed. The first analysis used the total score for English language proficiency as the dependent variable (H_1). To test subhypotheses H_{1a} - H_{1d} , four separate multiple regression analyses tested the explanatory variables and four different language acquisition variables

of listening (H_{1a}), speaking (H_{1b}), reading (H_{1c}), and writing (H_{1d}) as the dependent variables.

To test Hypothesis 2, that the frequency of participation in cooperative learning strategies of restructuring, one-centered, unified group, dyad, and small group are significant explanatory variables of English language acquisition proficiency for Taiwanese students (age 18 and older), one multiple regression analyses was performed. The second analysis used the total score for English language proficiency as the dependent variable (H_2). To test subhypotheses H_{2a} - H_{2d} , four separate multiple regression analyses tested the explanatory variables and four different language acquisition variables of listening (H_{2a}), speaking (H_{2b}), reading (H_{2c}), and writing (H_{2d}) as the dependent variables.

To test Hypothesis 3, that learner factors of age, gender, education, years learning English, motivation, anxiety, language aptitude, social distance, and learning strategies, and frequency of participation in cooperative learning strategies of restructuring, one-centered, unified group, dyad, and small group are significant explanatory variables of English language acquisition proficiency for Taiwanese students (age 18 or older). The third analysis used the total score for English language proficiency as the dependent variable (H_3). To test subhypotheses H_{3a} - H_{3d} , four separate multiple regression analyses tested the explanatory variables and four different language acquisition variables of listening (H_{3a}), speaking (H_{3b}), reading (H_{3c}), and writing (H_{3d}) as the dependent variables.

Other Analyses

Cronbach's coefficient alphas as estimates of internal consistency reliability was conducted on motivation, anxiety, language aptitude, social distance, cooperative learning strategies, and English language proficiency scales. Correlations between motivation and English language proficiency scales, established convergent validity. Correlations between anxiety and language aptitude scales established convergent validity. Correlations between social distance and cooperative learning strategies scales also established convergent validity.

Evaluation of Research Methods

This study was examined for internal validity and external validity by discussing the strengths and weaknesses of research methods. The evaluation of research methods are the following:

Internal Validity

Strengths.

1. Using a quantitative, nonexperimental, explanatory correlation survey research design with multiple regression analyses strengthens the internal validity and is stronger than a descriptive or qualitative method in causal inference.
2. In this study, data analysis procedures are considered appropriate for testing the hypotheses; therefore, the internal validity will be strengthened.
3. The instruments used in this study have evidence of good estimates of reliability and validity, contributing to the study's internal validity.
4. Online method of data collection allowed participants to complete survey on

their own time and avoided researcher bias from contract between researcher and subjects.

Weaknesses.

1. A nonexperimental study that lacks the level of internal validity found in an experimental design.
2. Online data collection cannot control the sharing of responses among participants.
3. The instruments may be translated, which may decrease the original validity and reliability.

External Validity

Strengths.

1. Homogeneous accessible population may decrease effects of extraneous variables.
2. Quantitative research allows for generalizing at-large population.
3. The entire accessible population was invited to participate in the online survey, therefore reaching the entire target population.
4. Online survey was completed in a natural environment, which avoids any threat to external validity in a lab setting.

Weaknesses.

1. Final data producing of the target population was a self-selected sample, therefore presenting a selection bias. These findings can only be generalized with caution.

Chapter III presents the research methodology that addressed the questions and

hypotheses about relationships among learner factors, cooperative learning strategies, four language skills (listening, speaking, reading, and writing), and second language acquisition proficiency. This chapter also includes a description of the proposed research design, the sampling plan, instrumentation, ethical considerations and data collection procedures, methods of data analysis, and evaluation of the research methods. Chapter IV presents the results of this study.

CHAPTER IV

RESULTS

This study was devised to explore the relationships between second language learner factors, English language acquisition, and the implementation of cooperative learning. This chapter presents the research questions and tests the hypotheses. The purpose of this study was to conduct research on the effectiveness of cooperative learning in the acquisition of English. Methods of data analysis included descriptive statistics and multiple regression analysis. The internal consistency reliability and convergent validity of the measurement scales were also examined and reported. The socio-demographic descriptive statistics provided the simple summary of profiles of participants and measures. Multiple regression analysis was adopted to predict the dependent variable from seven independent variables. The dependent variable of this study is the English language proficiency. The independent variables of this study were motivation, anxiety, language aptitude, social distance, and frequency of participation in cooperative learning.

In this study, 3420 undergraduate students attending the daytime Fortune Institute of Technology of Kaohsiung in Taiwan were invited to participate via e-mail on a hyper-link provided to the online survey. After one month of data collection, 396 responses were received for data analysis. All questionnaires were analyzed, using the statistical software of Statistical Package for Social Sciences (SPSS) for Windows version 13.0.

Socio-Demographic Characteristics of the Data-Producing Sample

Of the 396 Taiwanese university students who participated in the online survey, a response rate of 10% was obtained. This resulted in a total of 396 responses used in the

data analysis procedures. The respondents consisted of 184 (46.5%) males and 212 (53.5%) females. The majority of the respondents were female (53.5%). Table 4-1 and Figure 4-1 show the frequency distribution of the respondents' gender.

Table 4-1

Socio-Demographic Characteristics of the Sample by Gender

	Frequency	Valid Percentage
Male	184	46.5
Female	212	53.5
Total	396	100.0

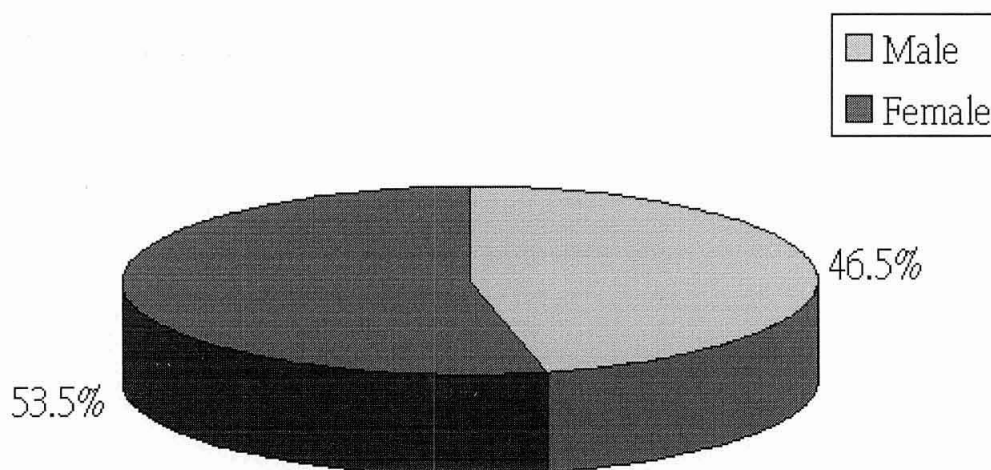


Figure 4-1. Distribution of the sample by gender.

A total of 396 respondents were within an age range from 19 to 28. The average of the participant's age was 22.19, with a standard deviation of 1.954 years. The largest age group of respondents was between 21 and 22 years of age (35.3%), and the smallest age group was between 27 and 28 years of age (1.8%). Table 4-2 and Figure 4-2 show the frequency distribution of the respondents' age.

Table 4-2

Socio-Demographic Characteristics of the Sample by Age

	Frequency	Valid Percentage
19-20	87	22.0
21-22	140	35.3
23-24	116	29.3
25-26	46	11.6
27-28	7	1.8
Total	396	100.0

The average age was 22.19 years of age, and the standard deviation is 1.954.

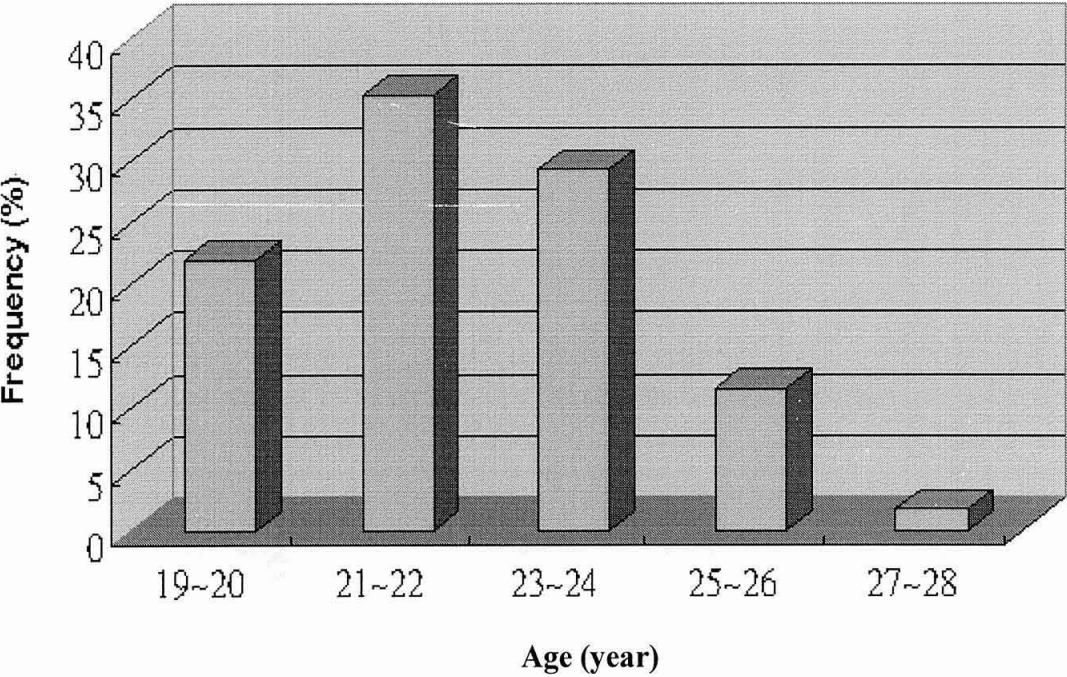


Figure 4-2. Distribution of the sample by age.

The result of this study indicated that 100% of Taiwanese university students are four-year college graduates (bachelor's degree). Table 4-3 presents the frequency distribution of the respondents' education category.

Table4-3

Socio-Demographic Characteristics of the Sample by Education Category

	Frequency	Valid Percentage
Four-Year College Graduate	396	100.0
One to Three Years College	0	0.0
High School Graduate	0	0.0
Ten to Eleven Years of School	0	0.0
Less Than Seven Years of School	0	0.0
Total	396	100.0

The result of this study indicated that 100% of Taiwanese university students have five or more years of experience learning English. Table 4-4 presents the frequency distribution of the respondents' years of experience learning English.

Table 4-4

Socio-Demographic Characteristics of the Sample by Years of Experience Learning English

	Frequency	Valid percentage
One year	0	0.0
Two years	0	0.0
Three years	0	0.0
Four years	0	0.0
Five or more	396	100.0
Total	396	100.0

Research Question 1: Descriptive Analysis for Question 1

1. What are the learner factors of age, gender, education, years learning English, motivation, anxiety, language aptitude, social distance, and learning strategies of Taiwanese students (age 18 or older) studying English as a second language?

In this study, age was divided into five groups: 19-20 years, 21-22 years, 23-24 years, 25-26 years, and 27-28 years of age, which were coded numerically as 1, 2, 3, 4, and 5. Language aptitude was also divided into five groups: 10-20 points, 30-40 points, 50-60 points, 70-80 points, and 90-100 points, which were coded numerically as 1, 2, 3, 4, and 5. The results of descriptive analysis for age, motivation, anxiety, language aptitude, social distance, and learning strategies indicated that language aptitude with the highest mean score was 3.485 (SD =1.101). Learning strategies with the second highest mean

score was 3.235 (SD =.878). The dependent variable of English language proficiency with a mean score was 3.219 (SD =.758). Table 4-5 presents the results of analysis of descriptive statistics for the second language learner factors.

Table 4-5

Descriptive Analysis of Second Language Learner Factors (N= 396)

Variables	Mean	Median	Mode	Std. Deviation	Variance
Age	2.360	2.000	2.000	1.005	1.010
Motivation	2.210	2.200	3.000	.611	.373
Anxiety	2.488	2.667	1.450	.751	.564
Language Aptitude	3.485	4.000	4.000	1.101	1.212
Social Distance	2.488	2.400	2.800	.745	.555
Learning Strategies	3.235	3.200	4.000	.878	.771
English Language Proficiency	3.219	3.500	3.750	.758	.574

Research Question 2: Descriptive Analysis for Question 2

2. What is the frequency of participation in cooperative learning strategies of restructuring, one-centered, unified group, dyad, and small group of Taiwanese students (age 18 or older) studying English as a second language?

The results of frequency analysis indicated that the largest group of respondents participated in cooperative learning strategies of restructuring at were least once a semester (34.6%). The majority of the respondents participated in cooperative learning

strategies of one-centered were at least once a week (28%). The majority of the respondents participated in cooperative learning strategies of unified group were at least once a week (33.6%). The majority of the respondents participated in cooperative learning strategies of dyad were at least once a week (33.8%). The majority of the respondents participated in cooperative learning strategies of small group were at least once a week (32.6%). Table 4-6 presents the results of analysis of descriptive statistics for the frequency of participation in cooperative learning strategies.

Table 4-6

Descriptive Analysis of the Frequency of Participation in Cooperative Learning Strategies (N= 396)

	Restructuring		One-centered		Unified-group		Dyad		Small group	
	n	%	n	%	n	%	n	%	n	%
Never	68	17.2	64	16.2	35	8.8	11	2.8	8	2.0
At least once a semester	137	34.6	78	19.7	81	20.5	62	15.7	61	15.4
At least once a month	95	24.0	91	23.0	90	22.7	95	24.0	79	19.9
At least once a week	86	21.7	111	28.0	133	33.6	134	33.8	129	32.6
Every class	10	2.5	52	13.1	57	14.4	94	23.7	119	30.1
Total	396	100.0	396	100.0	396	100.0	396	100.0	396	100.0

The results of descriptive analysis for subindependent variables (restructuring, one-centered, unified group, dyad, and small group) indicated that small group with the highest mean score was 3.732 (SD =1.109). Dyad with the second highest mean score of

3.601 (SD =1.094). The restructuring with the lowest mean score was 2.578 (SD =1.085). The dependent variable of English language proficiency with a mean score was 2.694 (SD =.688). Table 4-7 presents the results of analysis of descriptive statistics for the central tendency of participation in cooperative learning strategies.

Table 4-7

Descriptive Analysis of the Central Tendency of Participation in Cooperative Learning Strategies (N= 396)

Variables	Mean	Median	Mode	Std. Deviation	Variance
Restructuring	2.578	2.000	2.000	1.085	1.176
One-Centered	3.023	3.000	4.000	1.286	1.653
Unified Group	3.242	3.000	4.000	1.189	1.414
Dyad	3.601	4.000	4.000	1.094	1.197
Small Group	3.732	4.000	4.000	1.109	1.229
English Language Proficiency	3.219	3.500	3.750	.758	.574

Research Question 3: Descriptive Analysis for Question 3

3. What is the English language proficiency in listening, speaking, reading, and writing of Taiwanese students (age 18 or older) studying English as a second language?

The result of frequency analysis showed that the largest group of respondents of English language proficiency in listening skills had improved very much (60.4%). The majority of respondents of English language proficiency in speaking skills had improved

very much (58.6%). The majority respondents of English language proficiency in reading skills had improved very much (48.5%). The majority respondents of English language proficiency in writing skills had improved very much (33.6%). Table 4-8 presents the results of analysis of descriptive statistics for the frequency of English language proficiency in listening, speaking, reading, and writing.

Table 4-8

Descriptive Analysis of the Frequency of English Language Proficiency in Listening, Speaking, Reading and Writing (N= 396)

	Listening Skills		Speaking Skills		Reading Skills		Writing Skills	
	n	%	n	%	n	%	n	%
Have not improved	5	1.3	11	2.8	20	5.1	39	9.8
Have improved a little	69	17.4	64	16.2	72	18.2	94	23.7
Have moderately improved	83	21.0	89	22.5	112	28.3	130	32.8
Have improved very much	239	60.4	232	58.6	192	48.5	133	33.6
Total	396	100.0	396	100.0	396	100.0	396	100.0

The results of central tendency computed for subdependent variables (listening, speaking, reading, and writing) showed that listening skills with the highest mean score was 3.404 (SD =.817). Speaking skills with the second highest mean score was 3.369 (SD =.851). The writing skills with the lowest mean score was 2.902 (SD =.980). The

dependent variable of English language proficiency with a mean score was 3.219 (SD =.758). Table 4-9 presents the results of analysis of descriptive statistics for the central tendency of English language proficiency in listening, speaking, reading, and writing.

Table 4-9

Descriptive Analysis of the Central Tendency of English Language Proficiency in Listening, Speaking, Reading and Writing (N= 396)

Variables	Mean	Median	Mode	Std. Deviation	Variance
Listening Skills	3.404	4.000	4.000	.817	.667
Speaking Skills	3.369	4.000	4.000	.851	.724
Reading Skills	3.202	3.000	4.000	.911	.830
Writing Skills	2.902	3.000	4.000	.980	.960
English Language proficiency	3.219	3.500	3.750	.758	.574

Descriptive Analysis of Grade in English Class

The grade in English class indicated that the 396 Taiwanese university students with a mean score was 82.940 (SD = 6.539). The majority of the Taiwanese university students with a score was 80.000 (Mode = 80.000). Table 4-10 shows the results of analysis of descriptive statistics for the grade in English class.

Table 4-10

Descriptive Analysis of the Participants of Grade in English Class

N	Mean	Median	Mode	Std. Deviation	Variance
396	82.940	83.000	80.000	6.539	42.760

The result of this study indicated that the Taiwanese university student report of most recent grade range was from 66 to 96. The highest grade of participation was 96 (0.3%) and the lowest grade was 66. Table 4-11 presents the frequency and percentage distribution of grade in English class.

Table 4-11

Frequency and Percentage Distribution of Grade in English Class

Grade variable	Frequency	Valid Percentage
66-70	17	4.3
71-75	44	11.1
76-80	79	20.0
81-85	90	22.7
86-90	121	30.5
91-95	44	11.1
96 or more	1	0.3
Total	396	100.0

Hypothesis 1

H₁: Learner factors of age, gender, education, years learning English, motivation, anxiety, language aptitude, social distance, and learning strategies are significant explanatory variables of English language proficiency for Taiwanese students (age 18 or older).

H_{1a}: Learner factors of age, gender, education, years learning English, motivation, anxiety, language aptitude, social distance, and learning strategies are significant explanatory variables of English language proficiency in listening for Taiwanese students (age 18 or older).

H_{1b}: Learner factors of age, gender, education, years learning English, motivation, anxiety, language aptitude, social distance, and learning strategies are significant explanatory variables of English language proficiency in speaking for Taiwanese students (age 18 or older).

H_{1c}: Learner factors of age, gender, education, years learning English, motivation, anxiety, language aptitude, social distance, and learning strategies are significant explanatory variables of English language proficiency in reading for Taiwanese students (age 18 or older).

H_{1d}: Learner factors of age, gender, education, years learning English, motivation, anxiety, language aptitude, social distance, and learning strategies are significant explanatory variables of English language proficiency in writing for Taiwanese students (age 18 or older).

Multiple Regression Analysis for Hypothesis 1

Multiple regression analysis was conducted to examine the relationship between learner factor variables (age, gender, motivation, anxiety, language aptitude, social distance, and learning strategies), and the dependent variable of English language proficiency. As shown in Table 4-12, the F value (71.87) for the overall regression was significant ($p \leq .000$). The coefficient of the adjusted R square value was .56. This indicated that 56% (55.7) of the variation in English language proficiency was explained by the model

English language proficiency was the dependent variable in this study. Multiple regression analysis of the independent variables results in an R square value was .565. The score of R square value was statistically significant at the 0.01 level. The results of the model indicated that it has an appropriate set of variables to predict the dependent variable. According to the R square value, the explanatory variables account for 56.5% of the variation of the dependent variable. The remaining 43.5% of the variation of the dependent variable is due to the other variables not included in this model. Basically, there was a moderately strongly relationship among the dependent variable of English language proficiency and independent variables of motivation, anxiety, language aptitude, social distance, and learning strategies.

The t statistic of this model indicated that language aptitude had the most important effect on English language proficiency, which was 11.442 with a t , at the 0.01 level of significance. The regression analysis indicated that language aptitude was a significant predictor for English language proficiency. The second best predictor was motivation, which was 6.331 with a t , at the 0.01 level of significance. The analysis

pointed out that motivation was a major predictor of English language proficiency. The third best predictor was learning strategies, which was 6.018 with a t , at the 0.01 level of significance. This indicated that learning strategies also contributed as a predictor of English language proficiency. The results of analysis presented that the independent variables (motivation, anxiety, language aptitude, social distance, and learning strategies) have a moderately strong effect on English language proficiency. This demonstrated that these independent variables are a positive strategy conducts the second language learners to improve English language proficiency. Table 4-12 presents the results of multiple regression analysis for learner factors, which significantly predicted English language proficiency.

Table 4-12

Multiple Regression Analysis of Learner Factors on English Language Proficiency

Explanatory Variables	B	Std. Er.	BETA(β)	t	Sig. (p)
Age	-.018	.103	-.006	-.173	.863
Gender	.225	.215	.037	1.046	.296
Motivation	.115	.018	.231	6.331	.000**
Anxiety	.011	.004	.087	2.488	.013*
Language Aptitude	1.186	.104	.431	11.442	.000**
Social Distance	.083	.029	.102	2.864	.004**
Learning Strategies	.165	.027	.239	6.018	.000**

N=396

$F=71.868$

*** $p \leq .05$**

$p = .000$

**** $p \leq .01$**

$R^2 = .565$

Adjusted $R^2 = .557$

Multiple regression analysis was conducted to examine the relationship between learner factor variables (age, gender, motivation, anxiety, language aptitude, social distance, and learning strategies), and the dependent variable of English language proficiency in listening. As shown in Table 4-13, the F value (51.71) for the overall regression was significant ($p \leq .000$). The coefficient of the adjusted R square value was .47. This indicated that 47% of the variation of English language proficiency in listening was explained by the model.

English language proficiency in listening was the dependent variable in this study. Multiple regression analysis of the independent variables results in an R square value was .483. The score of R square value was statistically significant at the 0.01 level. The results of the model indicated that it had an appropriate set of variables to predict the dependent variable. According to the R square value, the explanatory variables account for 48.3% of the variation of the dependent variable. The remaining 51.7% of the variation of the dependent variable is due to the other variables not included in this model. Basically, there was a moderately strongly relationship among the dependent variable of English language proficiency in listening and independent variables of motivation, anxiety, language aptitude, social distance, and learning strategies.

The t statistic of this model indicated that language aptitude had the most important effect on English language proficiency in listening, which was 9.295 with a t , at the 0.01 level of significance. The regression analysis indicated that language aptitude was a significant predictor for English language proficiency in listening. The second best predictor was learning strategies, which was 5.845 with a t , at the 0.01 level of significance. The analysis suggested that learning strategies was a major predictor of

English language proficiency in listening. The third best predictor was motivation, which was 5.811 with a t , at the 0.01 level of significance. This indicated that motivation also contributed to the predictor of English language proficiency in listening. The results of analysis indicated that the independent variables (motivation, anxiety, language aptitude, social distance, and learning strategies) have a moderately strong effect on English language proficiency in listening. This result indicated that these independent variables are a positive strategy for second language learners to improve English language proficiency in listening. Table 4-13 presents the results of multiple regression analysis for learner factors significantly predicting the English language proficiency in listening.

Table 4-13

Multiple Regression Analysis of Learner Factors on English Language Proficiency in Listening

Explanatory Variables	B	Std. Er.	BETA(β)	t	Sig. (p)
Age	-.027	.030	-.033	-.894	.372
Gender	.117	.063	.072	1.852	.065
Motivation	.031	.005	.231	5.811	.000**
Anxiety	.001	.001	.016	.422	.674
Language Aptitude	.283	.030	.381	9.295	.000**
Social Distance	.017	.009	.078	1.994	.047*
Learning Strategies	.047	.008	.253	5.845	.000**

N=396

F=51.713

$p = .000$

$R^2 = .483$

Adjusted $R^2 = .473$

* $p \leq .05$

** $p \leq .01$

Multiple regression analysis was conducted to examine the relationship between learner factor variables (age, gender, motivation, anxiety, language aptitude, social distance, and learning strategies), and the dependent variable of English language proficiency in speaking. As shown in Table 4-14, the F value (48.94) for the overall regression was significant ($p \leq .000$). The coefficient of the adjusted R square value was .46. This delineated that 46% the variation in English language proficiency in speaking was explained by the model.

English language proficiency in speaking was the dependent variable in this study. Multiple regression analysis of the independent variables results in an R square value of .469. The score of R square value was statistically significant at the 0.01 level. The results of the model indicated that it has an appropriate set of variables to predict the dependent variable. According to the R square value, the explanatory variables explained 46.9% of the variation of the dependent variable. The remaining 53.1% of the variation of the dependent variable was due to the other variables not included in this model. Basically, there was a moderately strongly relationship among the dependent variable of English language proficiency in speaking and independent variables of motivation, anxiety, language aptitude, social distance, and learning strategies.

The t statistic of this model indicated that language aptitude had the most important effect on English language proficiency in speaking, which was 10.231 with a t , at the 0.01 level of significance. The regression analysis indicated that language aptitude was a significant predictor for English language proficiency in speaking. The second best predictor was learning strategies, which was 5.082 with a t , at the 0.01 level of significance. The analysis determined that learning strategies was a major predictor of

English language proficiency in speaking. The third best predictor was motivation, which was 5.066 with a *t*, at the 0.01 level of significance. This indicated that motivation also contributed to the predictor of English language proficiency in speaking. The results of analysis suggested that the independent variables (motivation, anxiety, language aptitude, social distance, and learning strategies) have a moderately strong effect on English language proficiency in speaking. This indicated that these independent variables are a positive strategy assisting second language learners to improve English language proficiency in speaking. Table 4-14 presents the results of multiple regression analysis for learner factors significantly predicted the English language proficiency in speaking.

Table 4-14

Multiple Regression Analysis of Learner Factors on English Language Proficiency in Speaking

Explanatory Variables	<i>B</i>	Std. Er.	BETA(β)	<i>t</i>	Sig. (<i>p</i>)
Age	-.019	.032	-.023	-.607	.544
Gender	.010	.067	.006	.155	.877
Motivation	.028	.006	.204	5.066	.000**
Anxiety	.000	.001	.012	.315	.753
Language Aptitude	.329	.032	.425	10.231	.000**
Social Distance	.022	.009	.097	2.464	.014*
Learning Strategies	.043	.008	.223	5.082	.000**
N=396					
F=48.938	<i>p</i> = .000	R ² =.469	Adjusted R ² =.459		
* <i>p</i> ≤ .05	** <i>p</i> ≤ .01				

Multiple regression analysis was conducted to examine the relationship between learner factor variables (age, gender, motivation, anxiety, language aptitude, social distance, and learning strategies), and the dependent variable of English language proficiency in reading. As shown in Table 4-15, the F value (37.55) for the overall regression was significant ($p \leq .000$). The coefficient of the adjusted R square value was .39. This pointed out that 39% of the variation in English language proficiency in reading was explained by the model.

English language proficiency in reading was the dependent variable in this study. Multiple regression analysis of the independent variables results in an R square value was .404. The score of R square value was statistically significant at the 0.01 level. The results of this model indicated an appropriate set of variables to predict the dependent variable. According to the R square value, the explanatory variables explained 40.4% of the variation of the dependent variable. The remaining 59.6% of the variation of the dependent variable is due to the other variables not included in this model. Basically, there was a moderately strongly relationship among dependent variable of English language proficiency in reading and independent variables of motivation, anxiety, language aptitude, social distance, and learning strategies.

The t statistic of this model indicated that language aptitude had the most important effect on English language proficiency in reading, which was 7.960 with a t , at the 0.01 level of significance. The regression analysis indicated that language aptitude was a significant predictor for English language proficiency in reading. The second best predictor was motivation, which was 5.147 with a t , at the 0.01 level of significance. The analysis suggested that motivation was a major predictor of English language proficiency

in reading. The third best predictor was learning strategies, which was 4.374 with a t , at the 0.01 level of significance. This indicated that learning strategies also contributed to the prediction of English language proficiency in reading. The results of analysis indicated that the independent variables (motivation, anxiety, language aptitude, social distance, and learning strategies) have a moderately strong effect on English language proficiency in reading. This suggests that these independent variables are a positive strategy to assist second language learners to improve English language proficiency in reading. Table 4-15 presents the results of multiple regression analysis for learner factors significantly predicted the English language proficiency in reading.

Table 4-15

Multiple Regression Analysis of Learner Factors on English Language Proficiency in Reading

Explanatory Variables	<i>B</i>	Std. Er.	BETA(β)	<i>t</i>	Sig. (<i>p</i>)
Age	-.008	.036	-.009	-.215	.830
Gender	.021	.076	.012	.283	.777
Motivation	.033	.006	.220	5.147	.000**
Anxiety	.003	.002	.075	1.817	.070
Language Aptitude	.290	.036	.351	7.960	.000**
Social Distance	.021	.010	.086	2.049	.041*
Learning Strategies	.042	.010	.203	4.374	.000**

N=396

F=37.546

$p = .000$

$R^2 = .404$

Adjusted $R^2 = .393$

*** $p \leq .05$**

**** $p \leq .01$**

Multiple regression analysis was conducted to examine the relationship between learner factor variables (age, gender, motivation, anxiety, language aptitude, social distance, and learning strategies), and the dependent variable of English language proficiency in writing. As shown in Table 4-16, the F value (28.34) for the overall regression was significant ($p \leq .000$). The coefficient of the adjusted R square value was .33. This indicated that 33% the variation in English language proficiency in writing was explained by the model.

English language proficiency in writing was the dependent variable in this study. Multiple regression analysis of the independent variables results in an R square value was .338. The score of R square value was statistically significant at the 0.01 level. The results of the model indicated that it has an appropriate set of variables to predict the dependent variable. According to the R square value, the explanatory variables explained 33.8% of the variation of the dependent variable. The remaining 66.2% of the variation of the dependent variable is due to the other variables not included in this model. Basically, there was a moderately strongly relationship among dependent variable of English language proficiency in writing and independent variables of motivation, anxiety, language aptitude, social distance, and learning strategies.

The t statistic of this model indicated that language aptitude had the most important effect on English language proficiency in writing, which was 6.877 with a t , at the 0.01 level of significance. The regression analysis indicated that language aptitude was a significant predictor for English language proficiency in writing. The second best predictor was motivation, which was 3.122 with a t , at the 0.01 level of significance. The analysis pointed out that motivation was a major predictor of English language

proficiency in writing. The third best predictor was learning strategies, which was 2.979 with a t , at the 0.01 level of significance. This indicated that learning strategies also contributed to the prediction of English language proficiency in writing. The results of the analysis showed that the independent variables (motivation, anxiety, language aptitude, social distance, and learning strategies) have a moderately strong effect on English language proficiency in writing. This indicated that these independent variables are a positive strategy to assist second language learners to improve English language proficiency in writing. Table 4-16 presents the results of multiple regression analysis for learner factors significantly predicted the English language proficiency in writing.

Table 4-16

Multiple Regression Analysis of Learner Factors on English Language Proficiency in Writing

Explanatory Variables	B	Std. Er.	BETA(β)	t	Sig. (p)
Age	.036	.041	.037	.886	.376
Gender	.076	.086	.039	.890	.374
Motivation	.023	.007	.140	3.122	.002**
Anxiety	.007	.002	.177	4.083	.000**
Language Aptitude	.284	.041	.319	6.877	.000**
Social Distance	.023	.012	.088	1.992	.047*
Learning Strategies	.033	.011	.146	2.979	.003**

N=396

F=28.337

$p = .000$

$R^2 = .338$

Adjusted $R^2 = .326$

*** $p \leq .05$**

**** $p \leq .01$**

Hypothesis 2

H₂: The frequency of participation in cooperative learning strategies of restructuring, one-centered, unified group, dyad, and small group are significant explanatory variables of English language proficiency for Taiwanese students (age 18 or older).

H_{2a}: The frequency of participation in cooperative learning strategies of restructuring, one-centered, unified group, dyad, and small group are significant explanatory variables of English language proficiency in listening for Taiwanese students (age 18 or older).

H_{2b}: The frequency of participation in cooperative learning strategies of restructuring, one-centered, unified group, dyad, and small group are significant explanatory variables of English language proficiency in speaking for Taiwanese students (age 18 or above).

H_{2c}: The frequency of participation in cooperative learning strategies of restructuring, one-centered, unified group, dyad, and small group are significant explanatory variables of English language proficiency in reading for Taiwanese students (age 18 or older).

H_{2d}: The frequency of participation in cooperative learning strategies of restructuring, one-centered, unified group, dyad, and small group are significant explanatory variables of English language proficiency in writing for Taiwanese students (age 18 or older).

Multiple Regression Analysis for Hypothesis 2

Multiple regression analysis was conducted to examine the relationship between the frequency of participation in cooperative learning strategies variables (restructuring, one-centered, unified group, dyad, and small group), and the dependent variable of English language proficiency. As shown in Table 4-17, the F value (28.47) for the overall regression was significant ($p \leq .000$). The coefficient of the adjusted R square value was .26. This indicated that 26% of the variation in English language proficiency was explained by the model.

English language proficiency was the dependent variable in this study. Multiple regression analysis of the independent variables results in an R square value was .267. The score of R square value was statistically significant at the 0.01 level. The results of model indicated that has an appropriate set of variables to predict the dependent variable. According to the R square value, the explanatory variables account for 26.7% of the variation of the dependent variable. The remaining 73.3% of the variation of the dependent variable is due to the other variables not included in this model. Basically, there was a moderately strongly relationship among dependent variable of English language proficiency and independent variables of restructuring, one-centered, unified group, dyad, and small group.

The t statistic of this model indicated that small group had the most important effect on English language proficiency, which was 4.536 with a t , at the 0.01 level of significance. The regression analysis indicated that small group was a significant predictor for English language proficiency. The second best predictor was restructuring, which was 3.298 with a t , at the 0.01 level of significance. The analysis showed that

restructuring was a major predictor of English language proficiency. The third best predictor was one-centered, which was 2.127 with a t , at the 0.05 level of significance. This indicated that one-centered also contributed to the prediction of English language proficiency. The results of analysis determined that the independent variables (restructuring, one-centered, unified group, dyad, and small group) have a moderately strong effect on English language proficiency. This indicated that these independent variables are a positive strategy conducts the second language learners to improve English language proficiency. Table 4-17 shows the results of multiple regression analysis for the frequency of participation in cooperative learning strategies significantly predicted the English language proficiency.

Table 4-17

Multiple Regression Analysis of the Frequency of Participation in Cooperative Learning Strategies on English Language Proficiency

Explanatory Variables	B	Std. Er.	BETA(β)	t	Sig. (p)
Restructuring	.488	.148	.175	3.298	.001**
One-Centered	.356	.167	.151	2.127	.034*
Unified Group	.103	.174	.040	.592	.555
Dyad	.174	.148	.063	1.172	.242
Small Group	.682	.150	.250	4.536	.000**

N=396

F=28.470

*** $p \leq .05$**

$p = .000$

**** $p \leq .01$**

$R^2 = .267$

Adjusted $R^2 = .258$

Multiple regression analysis was conducted to examine the relationship between the frequency of participation in cooperative learning strategies variables (restructuring, one-centered, unified group, dyad, and small group), and the dependent variable of English language proficiency in listening. As shown in Table 4-18, the F value (26.57) for the overall regression was significant ($p \leq .000$). The coefficient of the adjusted R square value was .24. This showed that 24% of the variation in English language proficiency in listening was explained by the model.

English language proficiency in listening was the dependent variable in this study. Multiple regression analysis of the independent variables results in an R square value was .254. The score of R square value was statistically significant at the 0.01 level. The results of this model indicated an appropriate set of variables to predict the dependent variable. According to the R square value, the explanatory variables explained 25.4% of the variation of the dependent variable. The remaining 74.6% of the variation of the dependent variable is due to the other variables not included in this model. Basically, there was a moderately strongly relationship among the dependent variable of English language proficiency in listening and independent variables of restructuring, one-centered, unified group, dyad, and small group.

The t statistic of this model indicated that small group had the most important effect on English language proficiency in listening, which was 4.826 with a t , at the 0.01 level of significance. The regression analysis indicated that small group was a significant predictor for English language proficiency in listening. The second best predictor was one-centered, which was 2.873 with a t , at the 0.01 level of significance. The analysis postulated that one-centered was a major predictor of English language proficiency in

listening. The third best predictor was restructuring, which was 2.772 with a t , at the 0.01 level of significance. This indicated that restructuring also contributed to the predictor of English language proficiency in listening. The results of analysis presented that the independent variables (restructuring, one-centered, unified group, dyad, and small group) have a moderately strong effect on English language proficiency in listening. This indicated that these independent variables are a positive strategy conducts the second language learners to improve English language proficiency in listening. Table 4-18 describes the results of multiple regression analysis for the frequency of participation in cooperative learning strategies significantly predicted the English language proficiency in listening.

Table 4-18

Multiple Regression Analysis of the Frequency of Participation in Cooperative Learning Strategies on English Language Proficiency in Listening

Explanatory Variables	B	Std. Er.	BETA(β)	t	Sig. (p)
Restructuring	.112	.040	.148	2.772	.006**
One-Centered	.131	.045	.206	2.873	.004**
Unified Group	.003	.047	.005	.071	.943
Dyad	.012	.040	.016	.304	.761
Small Group	.197	.041	.268	4.826	.000**

N=396

F=26.565

$p = .000$

$R^2 = .254$

Adjusted $R^2 = .244$

* $p \leq .05$

** $p \leq .01$

Multiple regression analysis was conducted to examine the relationship between the frequency of participation in cooperative learning strategies variables (restructuring, one-centered, unified group, dyad, and small group), and the dependent variable of English language proficiency in speaking. As shown in Table 4-19, the F value (20.20) for the overall regression was significant ($p \leq .000$). The coefficient of the adjusted R square value was .20. This indicated that 20% of the variation in English language proficiency in speaking was explained by the model.

English language proficiency in speaking was the dependent variable in this study. Multiple regression analysis of the independent variables results in an R square value was .206. The score of R square value was statistically significant at the 0.01 level. The results of the model indicate that it has an appropriate set of variables to predict the dependent variable. According to the R square value, the explanatory variables explained 20.6% of the variation of the dependent variable. The remaining 79.4% of the variation of the dependent variable is due to the other variables not included in this model. Basically, there was a moderately strongly relationship among dependent variable of English language proficiency in speaking and independent variables of restructuring, one-centered, unified group, dyad, and small group.

The t statistic of this model indicated that small group had the most important effect on English language proficiency in speaking, which was 3.229 with a t , at the 0.01 level of significance. The regression analysis indicated that small group was a significant predictor for English language proficiency in speaking. The second best predictor was restructuring, which was 2.722 with a t , at the 0.01 level of significance. The analysis presented that restructuring was a major predictor of English language proficiency in

speaking. The third best predictor was one-centered, which was 2.278 with a t , at the 0.05 level of significance. This indicated that one-centered also contributed to the prediction of English language proficiency in speaking. The results of analysis depicted that the independent variables (restructuring, one-centered, unified group, dyad, and small group) have a moderately strong effect on English language proficiency in speaking. This indicated that these independent variables are a positive strategy that assists the second language learners to improve English language proficiency in speaking. Table 4-19 presents the results of multiple regression analysis for the frequency of participation in cooperative learning strategies which significantly predicted the English language proficiency in speaking.

Table 4-19

Multiple Regression Analysis of the Frequency of Participation in Cooperative Learning Strategies on English Language Proficiency in Speaking

Explanatory Variables	B	Std. Er.	BETA(β)	t	Sig. (p)
Restructuring	.118	.043	.150	2.722	.007**
One-Centered	.111	.049	.168	2.278	.023*
Unified Group	.018	.051	.025	.345	.730
Dyad	.052	.043	.067	1.200	.231
Small Group	.142	.044	.185	3.229	.001**

N=396

F=20.203

p= .000

R²=.206

Adjusted R²=.196

***p≤ .05**

****p≤ .01**

Multiple regression analysis was conducted to examine the relationship between the frequency of participation in cooperative learning strategies variables (restructuring, one-centered, unified group, dyad, and small group), and the dependent variable of English language proficiency in reading. As shown in Table 4-20, the F value (17.57) for the overall regression was significant ($p \leq .000$). The coefficient of the adjusted R square value indicated that 17% (17.3) of the variation in English language proficiency in reading was explained by the model.

English language proficiency in reading was the dependent variable in this study. Multiple regression analysis of the independent variables results in an R square value was .184. The score of R square value was statistically significant at the 0.01 level. The results of model indicated that has an appropriate set of variables to predict the dependent variable. According to the R square value, the explanatory variables explained 18.4% of the variation of the dependent variable. The remaining 81.6% of the variation of the dependent variable is due to the other variables not included in this model. Basically, there was a moderately strong relationship among dependent variable of English language proficiency in reading and independent variables of restructuring, one-centered, unified group, dyad, and small group.

The t statistic of this model described how small groups had the most important effect on English language proficiency in reading, which was 3.048 with a t , at the 0.01 level of significance. The regression analysis indicated that small groups were a significant predictor for English language proficiency in reading. The second best predictor was restructuring, which was 2.413 with a t , at the 0.05 level of significance. The analysis pointed out that restructuring was a major predictor of English language

proficiency in reading. The results of the analysis showed that the independent variables (restructuring, one-centered, unified group, dyad, and small group) have a moderately strong effect on English language proficiency in reading. This indicated that these independent variables are a positive strategy conducts the second language learners to improve English language proficiency in reading. Table 4-20 presents the results of multiple regression analysis for the frequency of participation in cooperative learning strategies significantly predicted the English language proficiency in reading.

Table 4-20

Multiple Regression Analysis of the Frequency of Participation in Cooperative Learning Strategies on English Language Proficiency in Reading

Explanatory Variables	<i>B</i>	Std. Er.	BETA(β)	<i>t</i>	Sig. (<i>p</i>)
Restructuring	.113	.047	.135	2.413	.016*
One-Centered	.091	.053	.129	1.719	.086
Unified Group	.041	.055	.054	.751	.453
Dyad	.059	.047	.071	1.258	.209
Small Group	.145	.048	.177	3.048	.002**

N=396

F=17.567

***p*= .000**

R²=.184

Adjusted R²=.173

****p*≤ .05**

*****p*≤ .01**

Multiple regression analysis was conducted to examine the relationship between the frequency of participation in cooperative learning strategies variables (restructuring, one-centered, unified group, dyad, and small group), and the dependent variable of English language proficiency in writing. As shown in Table 4-21, the F value (14.49) for the overall regression was significant ($p \leq .000$). The coefficient of the adjusted R square value was .15. This indicated that 15% the variation in English language proficiency in writing was explained by the model.

English language proficiency in writing was the dependent variable in this study. Multiple regression analysis of the independent variables results in an R square value was .157. The score of R square value was statistically significant at the 0.01 level. The results of the model indicated an appropriate set of variables to predict the dependent variable. According to the R square value, the explanatory variables account for 15.7% of the variation of the dependent variable. The remaining 84.3% of the variation of the dependent variable is due to the other variables not included in this model. Basically, there was a moderately strong relationship among the dependent variable of English language proficiency in writing and independent variables of restructuring, one-centered, unified group, dyad, and small group.

The t statistic of this model indicated that small groups had the most important effect on English language proficiency in writing, which was 3.787 with a t , at the 0.01 level of significance. The regression analysis indicated that small groups were a significant predictor for English language proficiency in writing. The second best predictor was restructuring, which was 2.834 with a t , at the 0.01 level of significance. The analysis indicated that restructuring was a major predictor of English language

proficiency in writing. The results of the analysis pointed out that the independent variables (restructuring, one-centered, unified group, dyad, and small group) have a moderately strong effect on English language proficiency in writing. This indicated that these independent variables are a positive strategy conducts the second language learners to improve English language proficiency in writing. Table 4-21 describes the results of multiple regression analysis for the frequency of participation in cooperative learning strategies and significantly predicted the English language proficiency in writing.

Table 4-21

Multiple Regression Analysis of the Frequency of Participation in Cooperative Learning Strategies on English Language Proficiency in Writing

Explanatory Variables	B	Std. Er.	BETA(β)	t	Sig. (p)
Restructuring	.145	.051	.161	2.834	.005**
One-Centered	.023	.058	.030	.388	.698
Unified Group	.041	.060	.049	.672	.502
Dyad	.050	.051	.056	.980	.328
Small Group	.198	.052	.224	3.787	.000**

N=396

F=14.491

p= .000

R²=.157

Adjusted R²=.146

***p≤ .05**

****p≤ .01**

Hypothesis 3

H₃: Learner factors (age, gender, education, years learning English, motivation, anxiety, language aptitude, social distance, and learning strategies), and frequency of participation in cooperative learning strategies (restructuring, one-centered, unified group, dyad, and small group) are significant explanatory variables of English language proficiency for Taiwanese students (age 18 or older).

H_{3a}: Learner factors (age, gender, education, years learning English, motivation, anxiety, language aptitude, social distance, and learning strategies), and frequency of participation in cooperative learning strategies (restructuring, one-centered, unified group, dyad, and small group) are significant explanatory variables of English language proficiency in listening for Taiwanese students (age 18 or older).

H_{3b}: Learner factors (age, gender, education, years learning English, motivation, anxiety, language aptitude, social distance, and learning strategies), and frequency of participation in cooperative learning strategies (restructuring, one-centered, unified group, dyad, and small group) are significant explanatory variables of English language proficiency in speaking for Taiwanese students (age 18 or older).

H_{3c}: Learner factors (age, gender, education, years learning English, motivation, anxiety, language aptitude, social distance, and learning strategies), and frequency of participation in cooperative learning strategies (restructuring, one-centered, unified group, dyad, and small

group) are significant explanatory variables of English language proficiency in reading for Taiwanese students (age 18 or older).

H_{3d}: Learner factors (age, gender, education, years learning English, motivation, anxiety, language aptitude, social distance, and learning strategies), and frequency of participation in cooperative learning strategies (restructuring, one-centered, unified group, dyad, and small group) are significant explanatory variables of English language proficiency in writing for Taiwanese students (age 18 or older).

Multiple Regression Analysis for Hypothesis 3

Multiple regression analysis was conducted to examine the relationship between learner factors variables (age, gender, motivation, anxiety, language aptitude, and social distance), frequency of participation in cooperative learning strategies variables (restructuring, one-centered, unified group, dyad, and small group), and the dependent variable of English language proficiency. As shown in Table 4-22, the *F* value (46.36) for the overall regression was significant ($p \leq .000$). The coefficient of the adjusted R square value was .56. This indicated that 56% of the variation in English language proficiency was explained by the model.

English language proficiency was the dependent variable in this study. Multiple regression analysis of the independent variables results in an R square value was .570. The score of R square value was statistically significant at the 0.01 level. The results of the model indicated an appropriate set of variables to predict the dependent variable. According to the R square value, the explanatory variables explained 57% of the

variation of the dependent variable. The remaining 43% of the variation of the dependent variable is due to the other variables not included in this model. Basically, there was a moderately strong relationship among dependent variable of English language proficiency and independent variables of learner factors (age, gender, motivation, anxiety, language aptitude, social distance) and the frequency of participation in cooperative learning strategies (restructuring, one-centered, unified group, dyad, and small group).

The t statistic of this model indicated that language aptitude had the most important effect on English language proficiency, which was 11.389 with a t , at the 0.01 level of significance. The regression analysis indicated that language aptitude was a significant predictor for English language proficiency. The second best predictor was motivation, which was 6.199 with a t , at the 0.01 level of significance. The analysis presented that motivation was a major predictor of English language proficiency. The third best predictor was social distance, which was 2.903 with a t , at the 0.01 level of significance. This indicated that social distance also contributed to the predictor of English language proficiency. The results of analysis presented that the independent variables (age, gender, motivation, anxiety, language aptitude, social distance, restructuring, one-centered, unified group, dyad, and small group) have a moderately strong effect on English language proficiency. This indicated that these independent variables are a positive strategy which causes the second language learners to improve English language proficiency. Table 4-22 presents the results of multiple regression analysis for learner factors and the frequency of participation in cooperative learning strategies significantly predicted the English language proficiency.

Table 4-22

Multiple Regression Analysis of Learner Factors and the Frequency of Participation in Cooperative Learning Strategies on English Language Proficiency

Explanatory Variables	B	Std. Er.	BETA(β)	t	Sig. (p)
Age	.006	.104	.002	.059	.953
Gender	.221	.217	.036	1.017	.310
Motivation	.113	.018	.227	6.199	.000**
Anxiety	.011	.004	.086	2.453	.015*
Language Aptitude	1.191	.105	.433	11.389	.000**
Social Distance	.085	.029	.105	2.903	.004**
Restructuring	.286	.116	.102	2.474	.014*
One-Centered	.301	.131	.128	2.292	.022*
Unified Group	-.092	.137	-.036	-.671	.502
Dyad	.121	.115	.044	1.051	.294
Small Group	.228	.119	.083	1.911	.057

N=396

F=46.360

p= .000

R²=.570

Adjusted R²=.558

***p≤ .05**

****p≤ .01**

Multiple regression analysis was conducted to examine the relationship between learner factors variables (age, gender, motivation, anxiety, language aptitude, and social distance), frequency of participation in cooperative learning strategies variables (restructuring, one-centered, unified group, dyad, and small group), and the dependent variable of English language proficiency in listening. As shown in Table 4-23, the *F* value (34.11) for the overall regression was significant ($p \leq .000$). The coefficient of the

adjusted R square value was .48. This pointed out that 48% of the variation in English language proficiency in listening was explained by the model.

English language proficiency in listening was the dependent variable in this study. Multiple regression analysis of the independent variables results in an R square value was .494. The score of R square value was statistically significant at the 0.01 level. The results of the model indicated an appropriate set of variables to predict the dependent variable. According to the R square value, the explanatory variables explained 49.4% of the variation of the dependent variable. The remaining 50.6% of the variation of the dependent variable is due to the other variables not included in this model. Basically, there was a moderately strong relationship among dependent variable of English language proficiency in listening and independent variables (age, gender, motivation, anxiety, language aptitude, social distance, restructuring, one-centered, unified group, dyad, and small group).

The t statistic of this model indicated that language aptitude had the most important effect on English language proficiency in listening, which was 9.334 with a t , at the 0.01 level of significance. The regression analysis indicated that language aptitude was a significant predictor for English language proficiency in listening. The second best predictor was motivation, which was 5.660 with a t , at the 0.01 level of significance. The analysis presented that motivation was a major predictor of English language proficiency in listening. The third best predictor was one-centered, which was 3.180 with a t , at the 0.01 level of significance. This indicated that one-centered also contributed to the predictor of English language proficiency in listening. The results of analysis presented that the independent variables (age, gender, motivation, anxiety, language aptitude, social

distance, restructuring, one-centered, unified group, dyad, and small group) have a moderately strong effect on English language proficiency in listening. This indicated that these independent variables are a positive strategy which leads the second language learners to improve English language proficiency in listening. Table 4-23 presents the results of multiple regression analysis for learner factors and the frequency of participation in cooperative learning strategies significantly predicted the English language proficiency in listening.

Table 4-23

Multiple Regression Analysis of Learner Factors and the Frequency of Participation in Cooperative Learning Strategies on English Language Proficiency in Listening

Explanatory Variables	B	Std. Er.	BETA(β)	t	Sig. (p)
Age	-.020	.030	-.025	-.663	.507
Gender	.113	.063	.069	1.785	.075
Motivation	.030	.005	.225	5.660	.000**
Anxiety	.000	.001	.011	.279	.781
Language Aptitude	.285	.031	.385	9.334	.000**
Social Distance	.016	.009	.075	1.908	.057
Restructuring	.058	.034	.077	1.704	.089
One-Centered	.122	.038	.192	3.180	.002**
Unified Group	-.040	.040	-.058	-1.003	.316
Dyad	.000	.034	-.001	-.011	.991
Small Group	.092	.035	.125	2.636	.009**

N=396

F=34.108

p= .000

R²=.494

Adjusted R²=.480

***p≤ .05**

****p≤ .01**

Multiple regression analysis was conducted to examine the relationship between learner factors variables (age, gender, motivation, anxiety, language aptitude, and social distance), frequency of participation in cooperative learning strategies variables (restructuring, one-centered, unified group, dyad, and small group), and the dependent variable of English language proficiency in speaking. As shown in Table 4-24, the F value (31.75) for the overall regression was significant ($p \leq .000$). The coefficient of the adjusted R square value was .46. This indicated that 46% of the variation in English language proficiency in speaking was explained by the model.

English language proficiency in speaking was the dependent variable in this study. Multiple regression analysis of the independent variables results in an R square value was .476. The score of R square value was statistically significant at the 0.01 level. The results of the model indicated an appropriate set of variables to predict the dependent variable. According to the R square value, the explanatory variables explained 47.6% of the variation of the dependent variable. The remaining 52.4% of the variation of the dependent variable is due to the other variables not included in this model. Basically, there was a moderately strong relationship among the dependent variable of English language proficiency in speaking and independent variables (age, gender, motivation, anxiety, language aptitude, social distance, restructuring, one-centered, unified group, dyad, and small group).

The t statistic of this model indicated that language aptitude had the most important effect on English language proficiency in speaking, which was 10.359 with a t , at the 0.01 level of significance. The regression analysis indicated that language aptitude was a significant predictor for English language proficiency in speaking. The second best

predictor was motivation, which was 5.015 with a t , at the 0.01 level of significance. The analysis determined that motivation was a major predictor of English language proficiency in speaking. The third best predictor was one-centered, which was 2.690 with a t , at the 0.01 level of significance. This indicated that motivation also contributed to the predictor of English language proficiency in speaking. The results of this analysis determined that the independent variables (age, gender, motivation, anxiety, language aptitude, social distance, restructuring, one-centered, unified group, dyad, and small group) have a moderately strong effect on English language proficiency in listening. This indicated that these independent variables are a positive strategy which leads the second language learners to improve English language proficiency in speaking. Table 4-24 presents the results of multiple regression analysis for learner factors and the frequency of participation in cooperative learning strategies significantly predicted the English language proficiency in speaking.

Table 4-24

Multiple Regression Analysis of Learner Factors and the Frequency of Participation in Cooperative Learning Strategies on English Language Proficiency in Speaking

Explanatory Variables	B	Std. Er.	BETA(β)	t	Sig. (p)
Age	-.013	.032	-.015	-.396	.693
Gender	.002	.067	.001	.031	.975
Motivation	.028	.006	.203	5.015	.000**
Anxiety	.000	.001	.010	.246	.806
Language Aptitude	.336	.032	.435.	10.359	.000**
Social Distance	.022	.009	.097	2.442	.015*
Restructuring	.064	.036	.082	1.797	.073
One-Centered	.109	.041	.165	2.690	.007**
Unified Group	-.028	.042	-.040	-.669	.504
Dyad	.040	.036	.051	1.113	.266
Small Group	.024	.037	.032	.661	.509

N=396

F=31.745

p= .000

R²=.476

Adjusted R²=.461

***p≤ .05**

****p≤ .01**

Multiple regression analysis was conducted to examine the relationship between learner factors variables (age, gender, motivation, anxiety, language aptitude, and social distance), frequency of participation in cooperative learning strategies variables (restructuring, one-centered, unified group, dyad, and small group), and the dependent variable of English language proficiency in reading. As shown in Table 4-25, the *F* value (23.92) for the overall regression was significant ($p \leq .000$). The coefficient of the

adjusted R square value was .39. This indicated that 39% the variation in English language proficiency in reading was explained by the model.

English language proficiency in reading was the dependent variable in this study. Multiple regression analysis of the independent variables results in an R square value was .407. The score of R square value was statistically significant at the 0.01 level. The results of the model indicated that it has an appropriate set of variables to predict the dependent variable. According to the R square value, the explanatory variables explained 40.7% of the variation of the dependent variable. The remaining 59.3% of the variation of the dependent variable was due to the other variables not included in this model. Basically, there was a moderately strong relationship among the dependent variable of English language proficiency in reading and independent variables (age, gender, motivation, anxiety, language aptitude, social distance, restructuring, one-centered, unified group, dyad, and small group).

The t statistic of this model indicated that language aptitude had the most important effect on English language proficiency in reading, which was 7.963 with a t , at the 0.01 level of significance. The regression analysis indicated that language aptitude was a significant predictor for English language proficiency in reading. The second best predictor was motivation, which was 5.091 with a t , at the 0.01 level of significance. The analysis showed that motivation was a major predictor of English language proficiency in reading. The third best predictor was social distance, which was 2.046 with a t , at the 0.05 level of significance. This indicated that social distance also contributed to the predictor of English language proficiency in reading. The results of the analysis demonstrated that the independent variables (age, gender, motivation, anxiety, language

aptitude, social distance, restructuring, one-centered, unified group, dyad, and small group) have a moderately strong effect on English language proficiency in reading. This indicated that these independent variables are a positive strategy that leads the second language learners to improve English language proficiency in reading. Table 4-25 presents the results of multiple regression analysis for learner factors, and the frequency of participation in cooperative learning strategies significantly predicted the English language proficiency in reading.

Table 4-25

Multiple Regression Analysis of Learner Factors and the Frequency of Participation in Cooperative Learning Strategies on English Language Proficiency in Reading

Explanatory Variables	B	Std. Er.	BETA(β)	t	Sig. (p)
Age	-.003	.037	-.004	-.087	.931
Gender	.017	.077	.009	.219	.827
Motivation	.033	.006	.219	5.091	.000**
Anxiety	.003	.002	.074	1.786	.075
Language Aptitude	.294	.037	.356	7.963	.000**
Social Distance	.021	.010	.087	2.046	.041*
Restructuring	.063	.041	.075	1.537	.125
One-Centered	.078	.046	.110	1.677	.094
Unified Group	-.004	.048	-.005	-.077	.938
Dyad	0.45	.041	.054	1.108	.269
Small Group	.028	.042	.034	.665	.513

N=396

F=23.915

*** $p \leq .05$**

$p = .000$

**** $p \leq .01$**

$R^2 = .407$

Adjusted $R^2 = .390$

Multiple regression analysis was conducted to examine the relationship between learner factors variables (age, gender, motivation, anxiety, language aptitude, and social distance), frequency of participation in cooperative learning strategies variables (restructuring, one-centered, unified group, dyad, and small group), and the dependent variable of English language proficiency in writing. As shown in Table 4-26, the F value (18.49) for the overall regression was significant ($p \leq .000$). The coefficient of the adjusted R square value was .33. This indicated that 33% of the variation in English language proficiency in writing was explained by the model.

English language proficiency in writing was the dependent variable in this study. Multiple regression analysis of the independent variables results in an R square value was .346. The score of R square value was statistically significant at the 0.01 level. The results of this model indicated that it has an appropriate set of variables to predict the dependent variable. According to the R square value, the explanatory variables account for 34.6% of the variation of the dependent variable. The remaining 55.4 % of the variation of the dependent variable was due to the other variables not included in this model. Basically, there was a moderately strong relationship among the dependent variable of English language proficiency in writing and independent variables (age, gender, motivation, anxiety, language aptitude, social distance, restructuring, one-centered, unified group, dyad, and small group).

The t statistic of this model indicated that language aptitude had the most important effect on English language proficiency in writing, which was 6.607 with a t , at the 0.01 level of significance. The regression analysis showed that language aptitude was a significant predictor for English language proficiency in writing. The second best

predictor was anxiety, which was 4.175 with a t , at the 0.01 level of significance. The analysis demonstrated that anxiety was a major predictor of English language proficiency in writing. The third best predictor was motivation, which was 2.987 with a t , at the 0.01 level of significance. This indicated that motivation also contributed to the predictor of English language proficiency in writing. The results of the analysis showed that the independent variables (age, gender, motivation, anxiety, language aptitude, social distance, restructuring, one-centered, unified group, dyad, and small group) have a moderately strong effect on English language proficiency in writing. This result indicated that these independent variables are a positive strategy that causes the second language learners to improve English language proficiency in writing. Table 4-26 describes the results of multiple regression analysis for learner factors, and the frequency of participation in cooperative learning strategies significantly predicted the English language proficiency in writing.

Table 4-26

Multiple Regression Analysis of Learner Factors and the Frequency of Participation in Cooperative Learning Strategies on English Language Proficiency in Writing

Explanatory Variables	B	Std. Er.	BETA(β)	t	Sig. (p)
Age	.042	.041	.043	1.018	.309
Gender	.089	.087	.045	1.024	.307
Motivation	.022	.007	.135	2.987	.003**
Anxiety	.007	.002	.181	4.175	.000**
Language Aptitude	.276	.042	.310	6.607	.000**
Social Distance	.025	.012	.097	2.171	.031*
Restructuring	.101	.046	.112	2.195	.029*
One-Centered	-.008	.052	-.011	-.161	.872
Unified Group	-.020	.055	-.024	-.360	.719
Dyad	.037	.046	.041	.798	.426
Small Group	.084	.048	.095	1.765	.078

N=396

F=18.491

p= .000

R²= .346

Adjusted R²= .328

***p≤ .05**

****p≤ .01**

Reliability Analysis

The internal consistency reliability of the multiple-item scales was calculated by Cronbach's coefficient alpha. Leech, Barrett, and Morgan (2005) indicated that the coefficient alpha value of .7 or higher provided good estimates of internal consistency reliability. As shown in Table 4-27, coefficient alpha values range from .73 to .94 for the six dimensions. The first dimension, motivation scale, had a coefficient alpha of .90. The

anxiety scale had a coefficient alpha of .94. The language aptitude scale had a coefficient alpha of .73. The social distance scale of coefficient alpha was .75. The cooperative learning strategies scale of coefficient alpha was .82. The last dimension, English language proficiency scale of coefficient alpha, was .87. All six dimensions scale achieved an acceptable level of a coefficient alpha above .7. Therefore, the internal consistency reliability of instruments was considered to be good for social science research in this study.

Table 4-27

Cronbach's Coefficient Alpha for Internal Consistency Reliability of Scales

Dimensions	Number of Items	Cronbach's Alpha(α)
Motivation	10	.904
Anxiety	33	.935
Language Aptitude	10	.725
Social Distance	5	.746
Cooperative Learning Strategies	5	.817
English Language Proficiency	4	.872

Validity Analysis

The convergent validity of the multiple-item measures was computed by Pearson product moment correlation coefficient. Pearson correlation coefficient was employed to examine the relationship between two scales: motivation and English language proficiency scales, anxiety and language aptitude scales, social distance and cooperative learning strategies scales. The coefficient of correlation reflects the degree of linear

relationship between each two measures. The correlation coefficient takes value ranges from -1 to +1 (Abdi, 2007). A correlation of +1 means there is a perfect positive linear relationship between two measures. A value of -1 means there is a perfect negative linear relationship between two measures. As shown in Table 4-28, the correlation coefficients of each two measures are perfect positive linear relationship with statistically significant at the 0.01 level of significance.

The correlation coefficient between .00 and .20 is considered low relationship of convergent validity; the correlation coefficient between .20 and .40 is considered medium relationship of convergent validity; the correlation coefficient between .40 and .80 is considered high relationship of convergent validity; the correlation coefficient greater than .80 is considered very high relationship of convergent validity. As shown in Table 4-26, the correlation coefficient between the motivation and English language proficiency scales was .474, with statistically significant at the 0.01 level of significance. The correlation analysis indicated that between the two scales was high relationship of convergent validity. The correlation coefficient between the anxiety and language aptitude scales was .210, with statistically significant at the 0.01 level of significance. The correlation analysis indicated that between the two scales was medium relationship of convergent validity. The correlation coefficient between the social distance and cooperative learning strategies scales was .293, with statistically significant at the 0.01 level of significance. The correlation analysis indicated that between the two scales also was a medium relationship of convergent validity. Consequently, the result of this study indicated that convergent validity was established.

Table 4-28

Pearson Product Moment Correlation Coefficient for Convergent Validity of Scales

	Motivation	Anxiety	Social Distance
English Language Proficiency	.474**		
Language Aptitude		.210**	
Cooperative Learning Strategies			.293**

* Correlation is significant at the 0.05 level (2-tailed).

** Correlation is significant at the 0.01 level (2-tailed).

Chapter IV provides the results of socio-demographic characteristics of the data-producing sample and the findings of research questions and hypotheses. Chapter V includes a discussion of the findings and interpretations of the statistical results, practical implications, limitations, recommendations for future study and conclusions in this study of relationships between motivation, anxiety, language aptitude, social distance, cooperative learning strategies and English language proficiency.

CHAPTER V

DISCUSSION

With the rapidly growing knowledge of a multicultural world, cooperative learning approaches hold great promise for improving learners' achievement of high academic standards and the acquisition of English (Dumas, 2006). In mainstream education, cooperative learning applies group-based activities to create supportive environments that enable learners to succeed academically, improve interpersonal relationships, and enhance second language learning ability (Dumas, 2006; McCafferty, Jacobs, & Iddings, 2006). Cooperative learning also provides several advantages, including enhanced learner-learner interaction, improved ethnic relationships, and natural integration of listening, speaking, reading, and writing skills (Mason, 2006).

This study examined and provided explanatory knowledge of the relationship between learner factors, cooperative learning strategies, and the development of four language skills in the acquisition of English language proficiency for Taiwanese undergraduate students. The specific purposes of this nonexperimental, explanatory survey study were to (a) describe the socio-demographic characteristics, learner factors of motivation, anxiety, language aptitude, social distance, and English language proficiency for Taiwanese students; (b) explain the relationship between learner factors of age, gender, education, years learning English, motivation, anxiety, language aptitude, social distance, and learning strategies of English language proficiency for Taiwanese students; (c) elucidate the relationship between the frequencies of participation in cooperative learning strategies of restructuring, one-centered, unified group, dyad, and small group of English language proficiency for Taiwanese students; and (d) interpret the relationship between

learner factors (age, gender, education, years learning English, motivation, anxiety, language aptitude, social distance, and learning strategies), frequency of participation in cooperative learning strategies (restructuring, one-centered, unified group, dyad, and small group), and English language proficiency for Taiwanese university students. A total of three research questions were answered and three hypotheses were examined.

In this study, motivation was measured by some Taiwanese university students' perceptions of their motivation in the acquisition of English, using 10 items of the Motivational Intensity Subscale of the *Attitude/Motivation Test Battery* developed by Gardner (1985). Anxiety was measured by Taiwanese university students' perceptions of the levels of anxiety experienced in the acquisition of English, using 33 items of the *Foreign Language Classroom Anxiety Scale (FLCAS)* developed by Horwitz, Horwitz, and Cope (1986). Language aptitude was measured by Taiwanese university students' perceptions of word knowledge in the acquisition English, using the 10 items in the *Pimsleur Language Aptitude Battery (PLAB)* developed by Pimsleur (1966). Social distance was measured by Taiwanese university students' intention to maintain their classroom social (group) distance in the acquisition of English, using the five items in the modified *Classroom Social Distance Scale*. Frequency of participation in cooperative learning was measured by Taiwanese university students' perceptions of participation in cooperative learning strategies in the acquisition of English, using five items of the *Frequency of Participation in Cooperative Learning Scale*. English language proficiency was measured by Taiwanese university students' perceptions in the acquisition of English language proficiency, using the four items of the *Self-Reported Learning of the Four Language Skills* developed by Greenfield (2003).

Using convenience sampling, participants received e-mail invitations and voluntarily completed the online survey questionnaire. A total of 396 respondents completed the online survey. Findings indicated that learner factors of motivation, anxiety, language aptitude, social distance, and learning strategies were significant explanatory variables in the acquisition of English language proficiency. Findings also indicated that cooperative learning strategies of restructuring, one-centered, and small group were significant explanatory variables in the acquisition of English language proficiency. However, this study found that learner factors of age and gender and cooperative learning strategies of a unified group and dyad had no direct effects on the acquisition of English language proficiency, but had indirect, positive effects on the acquisition of English language proficiency for Taiwanese university students.

Interpretations

Socio-Demographic Characteristics of Taiwanese University Students

Based on the data analyzed in the *Socio-Demographic Characteristics*, the majority of Taiwanese university students of this study were female. This may indicate that females were more willing to complete the online survey and learn the English language. Demographic findings about gender in the present study were consistent with the study by Beiser and Hou (2000). The majority of Taiwanese university students were between the ages of 21 and 22 years (35.3%). This was a group of university sophomores born in 1986 or 1987. This indicates that sophomores may be more interested in learning English for acquisition. Findings about the ages of Taiwanese university students in this study were somewhat consistent with the study by Gass and Selinker (2001). In their

study, college-aged adults do very well on most tests measuring second language learning.

For the education category, all Taiwanese university students had a four-year college degree (bachelor's). It also indicates that those in the present study were full-time and homogeneous students. Demographic findings about education category were consistent with the study by Beiser and Hou (2000), which found a formal education effect on language acquisition. Higher education had an advantage in learning English language because students have developed metalinguistic learning skills. In terms of years of experience learning English, all Taiwanese university students had five or more years of experience learning English. This may mean that all Taiwanese university students learned English from junior high school until the university level. This finding was supported by Haynes (2005), which found that students need to spend 4-10 years to achieve cognitive academic language proficiency in the English language. At the beginning of advanced fluency, students still needed continued support from classroom instructors especially in content areas of the four language skills. Socio-demographic characteristics of the final data-producing sample were consistent with characteristics of the convenience sample. These demographic characteristics of Taiwanese university students were new, and contributed to the body of knowledge for emphasizing cooperative learning in the acquisition of English.

Research Question 1

In the present study, learner factors included seven dimensions of age, gender, motivation, anxiety, language aptitude, social distance, and learning strategies. English language proficiency was the dependent variable in this study. The mean scores for each

dimension are the following, with the order of importance first being language aptitude (3.485), learning strategies (3.235), anxiety and social distance (2.488), age (2.360), motivation (2.210), and gender (.540). Favorable mean scores of learner factors in English language proficiency can be interpreted as scores that are equal to or greater than a 3.0 (See Table 4-5). The dependent variable of English language proficiency with a mean score of .3219 (SD = .758) also was favorable.

The result of the descriptive analysis showed that language aptitude with the highest mean score was 3.485 (SD = 1.101). This indicated that language aptitude had the greatest effect on the acquisition of English. This finding was consistent with the study by Skehan (1989), who found that language aptitude is the best predictor in the acquisition of English. This finding was also supported Gass and Selinker (2001) that the language aptitude measure was found to be a better predictor of successful English language proficiency in a classroom environment. On the other hand, gender had the lowest mean score of .540 (SD = .499) in the present study. This showed that gender has the lowest effect on the acquisition of English. Learning strategies with the second highest mean score was 3.235 (SD = .878). This finding was consistent with Cohen (1998), who found that learning strategies may improve language learning related to the choice of information from input, organization, and integration of learner systems in English language proficiency. Directionality is an important issue with learning strategies.

Research Question 2

In this research, frequency of participation in cooperative learning strategies consisted of five subindependents: restructuring, one-centered, unified group, dyad, and small group. English language proficiency was the dependent variable in this study. The

mean scores for each subindependent variable were the following, in order of importance: small group (3.732), dyad (3.601), unified group (3.242), one-centered (3.023), and restructuring (2.578). Favorable mean scores of the frequency of participation in cooperative learning strategies in the acquisition of English can be interpreted as scores that are equal to or greater than a 3.0 (See Table 4-6). The dependent variable of English language proficiency with a mean score of .3219 ($SD = .758$) also was favorable.

The result of this analysis suggested that small group had the highest mean score: 3.732 ($SD = 1.109$). This indicated that small group had the greatest effect on the acquisition of English. This finding was consistent with the study by Christison (1990), which indicated that small group activity helps students develop techniques for whole-group interaction in the acquisition of English. On the other hand, restructuring had the lowest mean score with 2.578 ($SD = 1.085$) in the present study. This showed that restructuring has the lowest effect on the acquisition of English. This finding was not supported in the study by Christison (1990), which pointed out that restructuring activity usually requires students to interact physically as a group in English language learning. Dyad had the second highest mean score with 3.601 ($SD = 1.094$). This finding was supported by Christison (1990), who found that dyad is a useful and interesting activity that gives students the opportunity to work one-on-one with other students in the classroom learning English as a second language.

Research Question 3

In this study, English language proficiency consisted of four subdependents: listening skills, speaking skills, reading skills, and writing skills. English language proficiency was the dependent variable in this present study. The mean scores for each

subdependent variable were the following, in order of importance: listening skills (3.404), speaking skills (3.369), reading skills (3.202), and writing skills (2.902). Favorable mean scores of the acquisition of English language proficiency in listening, speaking, reading, and writing can be interpreted as scores that are equal to or greater than a 3.0 (See Table 4-7). The dependent variable of English language proficiency with a mean score of .3219 (SD = .758) also was favorable.

The result of this analysis showed that listening skills had the highest mean score: 3.404 (SD = .817). This indicated that listening skills had the greatest effect on the acquisition of English. This finding was consistent with the study by Brown (2004), which indicated that listening is a most popular style of assessment task in the acquisition of English. Conversely, writing skills had the lowest mean score with 2.902 (SD = .499) in the present study. This showed that writing skills had the weakest effect on the acquisition of English. This finding of writing skills was not supported by the empirical study by Brown (2004), which revealed that a writing task promotes the pedagogical benefit of guiding a second language learner in English language proficiency. Speaking skills, the second highest mean score, was 3.369 (SD = .851). This finding was consistent with Brown (2004), who stated that in English language courses, speaking assessment (role playing) is a popular pedagogical activity.

Research Question to Obtain Grade in English Class

The result of the analysis indicated that a total of 396 Taiwanese university students' grades in English class ranged from 66 to 96 (See Table 4-9). The highest grade of a language learner was 96 (0.3%), and the lowest grade was 66 (0.3%). In addition, the Taiwanese university students' mean score was 82.940 (SD = 6.539). This demonstrated

that the students obtained an average English score of 83. However, the majority of the Taiwanese university students obtained an English grade of 80 (mode = 80).

Hypothesis 1

Multiple regression analysis was conducted to determinate the best combination of seven dimensions of learner factors (age, gender, motivation, anxiety, language aptitude, social distance, and learning strategies) for predicting English language proficiency (H_1). The result indicated that except for age, gender in each dimension had a strong positive relationship with English language proficiency for Taiwanese university students. The finding showed that the greater the language aptitude, the more favorable the English language proficiency. This finding confirmed the proposition of Gass and Selinker (2001) that the language aptitude measure was found to be a better predictor of successful English language proficiency in the classroom environment. As a matter of fact, language aptitude is consistently the best predictor of English language learning success (Skehan, 1989). The result of this study suggested that a greater motivation could increase English language proficiency. This finding was consistent with Gass and Selinker (2001), who stated that motivation is a predictor of second language learning success. Research by Norris-Holt (2001) pointed out that motivation has been identified as the language learner's direction in regard to the goal of learning a second language. In addition, the finding also supported by Pimsleur (1966) described a number of intellectual and motivational factors thought to contribute to success in English language learning, and assess different aspects of four factors verified to be significantly related to the acquisition of English language proficiency

The study found that learning strategies was positively and significantly

correlated with English language proficiency. This finding was supported by Cohen's research (1998), which found that learning strategies may improve language learning related to the choice of information from input, organization, and integration of learner systems in English language proficiency. Directionality is an important issue with learning strategies.

Multiple regression analysis was conducted to determinate the best combination of learner factors (age, gender, motivation, anxiety, language aptitude, social distance, and learning strategies) for predicting English language proficiency in listening (H_{1a}). This result indicated that age, gender, and anxiety had no effect on English language proficiency in listening. The other four dimensions of motivation, language aptitude, social distance, and learning strategies had a strong positive correlation with English language proficiency in listening for Taiwanese university students. In the mode of this study, language aptitude contributed most to predict English language proficiency in listening. This finding confirmed the results of the empirical research of Gass and Selinker (2001) and Skehan (1989). Learning strategies was the second predictor of English language proficiency in listening. This finding was supported by Cohen (1998). Motivation was the third important predictor of the English language proficiency in listening. This finding was consistent with the findings of empirical studies (Gass & Selinker, 2001; Norris-Holt, 2001; Pimsleur, 1966).

Multiple regression analysis was conducted to determinate the best combination of learner factors (age, gender, motivation, anxiety, language aptitude, social distance, and learning strategies) for predicting English language proficiency in speaking (H_{1b}). This result indicated that age, gender, and anxiety had no effect on English language

proficiency in speaking. The other four dimensions of motivation, language aptitude, social distance, and learning strategies had a strong positive correlation with English language proficiency in speaking for Taiwanese university students. In the mode of this study, language aptitude contributed most to predict English language proficiency in speaking. This finding was confirmed by the results of the empirical research by Gass and Selinker (2001) and Skehan (1989). Learning strategies was the second predictor of English language proficiency in speaking. This finding was supported by Cohen (1998). Motivation was the third important predictor of the English language proficiency in speaking. This finding was consistent with the findings of empirical studies (Gass & Selinker, 2001; Norris-Holt, 2001; Pimsleur, 1966).

Multiple regression analysis was conducted to determinate the best combination of learner factors (age, gender, motivation, anxiety, language aptitude, social distance, and learning strategies) for predicting English language proficiency in reading (H_{1c}). This result indicated that age, gender, and anxiety had no effect on English language proficiency in reading. The other four dimensions of motivation, language aptitude, social distance, and learning strategies had a strong positive correlation with English language proficiency in reading for Taiwanese university students. In the mode of this study, language aptitude contributed most to predict English language proficiency in reading. This finding was confirmed by the results of the empirical research by Gass and Selinker (2001) and Skehan (1989). Motivation was the second important predictor of the English language proficiency in reading. This finding was consistent with the findings of empirical studies (Gass & Selinker, 2001; Norris-Holt, 2001; Pimsleur, 1966). Learning strategies was the third predictor of English language proficiency in listening. This

finding was supported by Cohen (1998).

Multiple regression analysis was conducted to determinate the best combination of learner factors (age, gender, motivation, anxiety, language aptitude, social distance, and learning strategies) for predicting English language proficiency in writing (H_{1d}). This result indicated that socio-demographic characteristics of age and gender did not have an effect on English language proficiency in writing. The other five dimensions of motivation, anxiety language aptitude, social distance, and learning strategies had a strong positive correlation with English language proficiency in writing for Taiwanese university students. In the mode of this study, language aptitude contributed most to predict English language proficiency in writing. This finding confirmed the results of empirical research by Gass and Selinker (2001) and Skehan (1989). Motivation was the second predictor of English language proficiency in writing. This finding was consistent with the findings of empirical studies (Gass & Selinker, 2001; Norris-Holt, 2001; Pimsleur, 1966). Learning strategies was the third predictor of English language proficiency in listening. This finding was supported by Cohen (1998).

Hypothesis 2

This study used a multiple regression analysis to evaluate the best overall fit of the frequency of participation in cooperative learning strategies of restructuring, one-centered, unified group, dyad, and small group on English language proficiency (H_2). The analysis resulted in a finding that the unified group and dyad did not have an effect on English language proficiency. Three independent constructs (restructuring, one-centered, and small group) were predictors of English language proficiency.

Of these, small group appeared to be the dominant predictor of English language

proficiency. This may indicate that Taiwanese university students like to participate in small-group activities in the ESL classroom greatly. That may be one of the reasons why small groups are the dominant predictor of English language proficiency. This finding was supported by Christison (1990), who stated that small-group activity helps students develop techniques for whole-group interaction in English language proficiency. Restructuring was the second predictor of English language proficiency. The finding confirms the importance of cooperative learning strategies of restructuring in English language proficiency as suggested by Christison (1990). Basically, restructuring activity usually requires students to interact physically as a group in English language learning (Christison, 1990).

One-centered was the third important predictor of English language proficiency. This finding was consistent with Christison (1990), who indicated that one-centered activity used spotlight interviews to increase students' English language ability in the ESL classroom.

Multiple regression analysis was employed to evaluate the best combination of frequency of participation in cooperative learning strategies of restructuring, one-centered, unified group, dyad, and small group on English language proficiency in listening (H_{2a}). The analysis resulted in a finding that unified group and dyad did not have an obvious effect on English language proficiency in listening. Three independent constructs (restructuring, one-centered, and small group) were predictors of English language proficiency in listening. The small group appeared to be the dominant predictor of English language proficiency in listening. This finding was supported by Christison (1990). One-centered was played the second important predictor of English

language proficiency in listening. This finding was also consistent with Christison (1990). Restructuring was the third predictor of English language proficiency in listening. This finding was confirmed by Christison (1990), who indicated that the importance of cooperative learning strategies of restructuring in English language proficiency is listening.

Multiple regression analysis was employed to evaluate the best combination of the frequency of participation in cooperative learning strategies of restructuring, one-centered, unified group, dyad, and small group on English language proficiency in speaking (H_{2b}). The analysis resulted in a finding that a unified group and dyad did not have an obvious effect on English language proficiency in speaking. Three independent constructs (restructuring, one-centered, and small group) were predictors of English language proficiency in speaking. Small group appeared to be the dominant predictor of English language proficiency in speaking. This finding was supported by Christison (1990). Restructuring was the second predictor of English language proficiency in speaking. This finding was also confirmed by Christison (1990), who indicated the importance of cooperative learning strategies in English language proficiency in speaking. One-centered was the third important predictor of English language proficiency in speaking. This finding was again consistent with Christison (1990).

Multiple regression analysis was employed to evaluate the best combination of the frequency of participation in cooperative learning strategies of restructuring, one-centered, unified group, dyad, and small group on English language proficiency in reading (H_{2c}). The analysis resulted in finding that one-centered, unified group, and dyad did not have an obvious effect on English language proficiency in reading. Two

independent constructs (restructuring and small group) were predictors of English language proficiency in reading. Small group appeared to be the dominant predictor of English language proficiency in reading. This finding was supported by Christison (1990). Restructuring was the second predictor of English language proficiency in reading. This finding was also confirmed by Christison (1990), who described the importance of cooperative learning strategies of restructuring in English language proficiency in reading.

Multiple regression analysis was employed to evaluate the best combination of the frequency of participation in cooperative learning strategies of restructuring, one-centered, unified group, dyad, and small group on English language proficiency in writing (H_{2d}). The analysis resulted in finding that one-centered, unified group and dyad did not have an obvious effect on English language proficiency in writing. Two independent constructs (restructuring and small group) were predictors of English language proficiency in writing. Small group appeared to be the dominant predictor of English language proficiency in writing. This finding was supported by Christison (1990). Restructuring was the second predictor of English language proficiency in writing. This finding was again confirmed by Christison (1990), who indicated the importance of cooperative learning strategies of restructuring in English language proficiency in writing.

Hypothesis 3

Multiple regression analysis was used to examine the best combination of learner factors (age, gender, motivation, anxiety, language aptitude, and social distance) and cooperative learning strategies (restructuring, one-centered, unified group, dyad, and

small group) for predicting English language proficiency (H_3). The result indicated a strong positive relationship with English language proficiency for Taiwanese university students, except for age, gender, unified group, dyad, and small group

The finding again pointed out that language aptitude contributed importantly to predict English language proficiency. This finding confirmed the proposition of Gass and Selinker (2001) that the language aptitude measure was found to be a better predictor of successful English language proficiency in a classroom environment. Language aptitude is consistently the best predictor of English language learning success (Skehan, 1989).

The result of this study suggested motivation as the second most important factor to predict English language proficiency. The finding was consistent with Gass and Selinker (2001) that motivation is a predictor of second language learning success. The research of Norris-Holt (2001) pointed out that motivation has been identified as the language learner's direction in regard to the goal of learning a second language. In addition, the finding also was supported by Pimsleur (1966), who described a number of intellectual and motivational factors thought to contribute to success in English language learning. The study described different aspects of the four factors verified to be significantly related to English language proficiency.

The study found that social distance was also positively and significantly correlated with English language proficiency for Taiwanese university students. But this finding was not supported by the empirical research of Schumann (1978b). According to Schumann (1978b), acculturation is the most critical variable of English language acquisition. That is, as language learners acculturate, learners are more likely to learn.

Multiple regression analysis was conducted to determine the best combination of

learner factors (age, gender, motivation, anxiety, language aptitude, and social distance) and cooperative learning strategies (restructuring, one-centered, unified group, dyad, and small group) for predicting English language proficiency in listening (H_{3a}). The analysis resulted in a finding that age, gender, anxiety, social distance, restructuring, unified group, and dyad, did not have an obvious relationship with English language proficiency in listening for these students. The other four independent variables (motivation, language aptitude, one-centered, and small group) had a strong relationship with English language proficiency in listening. The finding reflected that the language aptitude appeared to be the dominant predictor of English language proficiency in listening. This finding confirmed the proposition of Gass and Selinker (2001). Actually, language aptitude is consistently the best predictor of English language learning success (Skehan, 1989). The result of this study stated that motivation was the second most important factor in predicting English language proficiency in listening. This finding was consistent with the findings of empirical studies (Gass & Selinker, 2001; Norris-Holt, 2001; Pimsleur, 1966). The study again found that one-centered was positively and significantly correlated with English language proficiency in listening for these students. This finding was supported by the empirical research of Christison (1990), who indicated that one-centered activity used spotlight interviews to improve the learners' English language ability in the ESL classroom.

Multiple regression analysis was conducted to determine the best combination of learner factors (age, gender, motivation, anxiety, language aptitude, and social distance) and cooperative learning strategies (restructuring, one-centered, unified group, dyad, and small group) for predicting English language proficiency in speaking (H_{3b}). The analysis

reported in a finding that age, gender, anxiety, restructuring, unified group, dyad, and small group have a relationship with English language proficiency in speaking for Taiwanese university students. The other four independent variables (motivation, language aptitude, social distance, and one-centered) had a strong relationship with English language proficiency in speaking. The finding again reflected that the language aptitude appeared to be the dominant predictor of English language proficiency in speaking. This finding confirmed the proposition of Gass and Selinker (2001). Actually, language aptitude is consistently the best predictor of English language learning success (Skehan, 1989). The result of this study stated that motivation was the second most important factor to predict English language proficiency in speaking. This finding was consistent with the findings of empirical studies (Gass & Selinker, 2001; Norris-Holt, 2001; Pimsleur, 1966). The study again found that one-centered was positively and significantly correlated with English language proficiency in speaking for Taiwanese university students. This finding was supported by the empirical research by Christison (1990), who indicated that one-centered activity used spotlight interviews to improve learners' English language ability in the ESL classroom.

Multiple regression analysis was conducted to determine the best combination of learner factors (age, gender, motivation, anxiety, language aptitude, and social distance) and cooperative learning strategies (restructuring, one-centered, unified group, dyad, and small group) for predicting English language proficiency in reading (H_{3c}). The analysis found that age, gender, anxiety, restructuring, one-centered, unified group, dyad, and small group did not have an obvious relationship with English language proficiency in reading for these students.

Three independent constructs (motivation, language aptitude, and social distance) had a strong relationship with English language proficiency in reading. The finding again reflected that language aptitude appeared to be the dominant predictor of English language proficiency in reading. This finding confirmed the proposition of Gass and Selinker (2001). Language aptitude is consistently the best predictor of English language learning success (Skehan, 1989). The result of this study pointed out that motivation was the second most important factor to predict English language proficiency in reading. This finding was consistent with the findings of empirical research (Gass & Selinker, 2001; Norris-Holt, 2001; Pimsleur, 1966). The study found that social distance was also positively and significantly correlated with English language proficiency in reading. Conversely, this finding was not supported by the empirical research of Schumann (1978b). According to Schumann (1978b), acculturation is the most critical variable of English language acquisition. This means that as language learners acculturate, learners are more likely to learn.

Multiple regression analysis was conducted to determine the best combination of learner factors (age, gender, motivation, anxiety, language aptitude, and social distance) and cooperative learning strategies (restructuring, one-centered, unified group, dyad, and small group) for predicting English language proficiency in writing (H_{3d}). The analysis found that age, gender, one-centered, unified group, dyad, and small group did not have an obvious relationship with English language proficiency in writing for Taiwanese students.

Five independent variables (motivation, anxiety, language aptitude, social distance, and restructuring) had a strong relationship with English language proficiency in writing.

The finding again reflected that language aptitude appeared to be the dominant predictor of English language proficiency in writing. This finding confirmed the propositions of Gass and Selinker (2001) and Skehan (1989). The result of this study presented anxiety as the second most important factor to predict English language proficiency in writing. This finding was consistent with Geen (1991), who pointed out that motivation is obviously related to anxiety in that high motivation with subjective desire of accomplishment increases anxiety. However, in English language learning situations, social anxiety could involve teachers, peer learners, and interlocutors. For this reason, anxiety clearly affects English language proficiency in writing (Geen, 1991). The study found that motivation was also positively and significantly correlated with English language proficiency in writing. This finding was supported by empirical studies (Gass & Selinker, 2001; Norris-Holt, 2001; Pimsleur, 1966).

Reliability Analysis

Cronbach's coefficient alpha was conducted to measure internal consistency reliability. Leech et al. (2005) suggested that alpha is based on the average relationship of each item in the scale with every other item. In addition, the alpha is typically and widely was applied to measure the internal consistency reliability. This study indicated that the coefficient alpha values for six dimensions exceeded the minimum standard of .7 and falling between .725 and .935. The lower loading of the language aptitude scale might have resulted from psychological complexity. Basically, the internal consistency reliability of scales was considered to be positive for social science research.

Validity Analysis

Pearson product moment correlation coefficient was used to examine the relationship between two instruments (motivation and English language proficiency scales, anxiety and language aptitude scales, and social distance and cooperative learning strategies scales) of convergent validity. The correlation analysis indicated that between the motivation and English language proficiency scales was a high relationship of convergent validity. This finding was consistent with Gass and Selinker (2001), who suggested that motivation is a predictor of second language learning success. In addition, the finding also was supported by Norris-Holt (2001), who pointed out that motivation has been identified as the language learner's direction in regard to the goal of learning a second language. The finding of this study showed that the greater motivation, the more effect on English language proficiency. The correlation analysis indicated that between the anxiety and language aptitude instruments was a medium relationship of convergent validity. This means anxiety is moderately related to language aptitude in that lower anxiety with subjective desire of accomplishment increases language aptitude. Whether a person is more or less anxious is connected to personality. The correlation analysis indicated that between the social distance and cooperative learning strategies measurements was also a medium correlation of convergent validity. This finding stated that social distance is moderately related to cooperative learning strategies in that less social distance may increase cooperative learning strategies success. Furthermore, successful cooperative learning strategies would increase learner-learner interaction and English language proficiency.

Practical Implications

1. The acquisition of English language proficiency may help improve motivation, anxiety, language aptitude, social distance, and cooperative learning strategies. Even though some items of learner factors and cooperative learning strategies did not have a relationship to English language proficiency as a result of findings in this study, those factors could not be ignored and may be essential requirements for Taiwanese university students.
2. Motivation and language aptitude appeared to be significant predictors of English language proficiency. An instructor may consider different group-based cooperative learning strategies to motivate language learners and enhance language aptitude to acquire English language proficiency.
3. The university, by providing better equipment, may improve the environment for Taiwanese university students and instructors in ESL classrooms. This updated equipment should include hardware and software, which would help reduce anxiety for Taiwanese university students when developing proficiency in English language acquisition. In addition, an improved environment could also assist students by decreasing social distance in the ESL classroom.
4. The instructor plays an important role in the ESL classroom. Institutions might advocate a training program for ESL teachers. Such a program would include demonstrations of cooperative learning techniques, use of a variety of materials to teach various language skills, and explain how difficulties encountered were resolved. As a consequence, the trained ESL instructors

would be better equipped to assist Taiwanese university students to be more successful learners of English.

5. The university may formulate various competitive strategies based on the acquisition of English language proficiency model to motivate Taiwanese university students to become more enthusiastic learners of the English language and develop increased student to student interaction.
6. The university may consider coordinating computer-enhanced or blended instruction in English language teaching and provide fascinating online English language programs utilizing “blackboard” activities for Taiwanese university students. Computer-based learning may decrease student’s anxiety and improve success in English language proficiency.

Conclusions

1. Learner factors of motivation, anxiety, language aptitude, social distance, and learning strategies had a positive relationship with English language proficiency for Taiwanese university students. Findings in this study support empirical literature (Gass & Selinker, 2001; Norris-Holt, 2001; Geen, 1991; Skehan, 1989; Cohen, 1998; Brown, 2004).
2. Frequency of participation in cooperative learning strategies had a positive relationship with the acquisition of English language proficiency for Taiwanese university students. These results moderately support the empirical findings reported by Christison (1990).
3. Age and gender as dimensions of learner factors rarely appear to have an effect on English language proficiency for these students; however, those may

be fundamental requirements for English language proficiency in this study.

The issues of age and gender become significant in the acquisition of English.

4. The frequency of participation in cooperative learning strategies of unified group and dyad may not be significant factors affecting English language proficiency for second language learners. However, those are one of the cooperative learning strategies and necessary requirements in exploring the acquisition of English in this present study.
5. For English language proficiency, the greater the motivation, the greater the language aptitude. The greater the language aptitude, the greater the opportunity that Taiwanese university students will have favorable intentions toward the acquisition of English language proficiency. Findings in this research are consistent with gratification literature (Gass & Selinker, 2001; Norris-Holt, 2001; Skehan, 1989; Brown, 2004).
6. Findings in this study may contribute to the field of English language learner factors, frequency of participation in cooperative learning strategies, and English language proficiency.

Limitations

1. Undergraduate students have to be motivated to understand the acquisition of English language proficiency for answering online questionnaires about language learner factors, cooperative learning strategies, and the four language skills.
2. The methods are nonrandom and may produce sampling bias, threatening external validity. The results acquired by the convenience sampling method

were difficult to generalize to the population because a convenience sampling method was a type of nonprobability sampling.

3. This study was primarily a one-time, online survey study due to the constraints of cost and time, in spite of a long-term longitudinal approach that is significant for a research of second language learner factors.
4. This study only investigated university students of learner factors in the acquisition of English language proficiency, which may not be applicable for learners at different education levels.
5. The findings of the sample were a result of a study in Taiwan and cannot be generalized to other countries where language acquisition models exist, such as learner factors, due to the differences in the nature of education systems of each country.
6. The online survey sent invitation e-mails to undergraduate students and may not have reached a representative sample of the whole target population. Therefore, generalization of the findings to all Taiwanese university students should be done with caution.
7. The respondents in this research were voluntary online questionnaire participants, and they may have finished a similar survey prior to participating in this study. Similar studies at different times are likely to indicate different results.
8. Only studying a single group may affect the internal validity of this study. This single group included a testing threat, an instrumentation threat, and a regression threat (Trochim, 2006).

Recommendations for Future Study

1. This research was limited to examining the causal relationships between motivation, anxiety, language aptitude, social distance, cooperative learning strategies, and English language proficiency. Any future study could explore other significant variables of cognitive development and language input of the English language proficiency, which may be added to the hypothesized causal structural model.
2. Future studies may employ more diversified random samples to verify the findings of this present research.
3. Future studies may measure variables in predicting English language proficiency in the context of socio-cultural and cross-national differences.
4. Future research may use a structural equation modeling method to examine the causal relationship among motivation, anxiety, language aptitude, social distance, cooperative learning strategies, and English language proficiency.
5. Future research may employ a different sampling method to collect data, for example, randomly selecting participants from a list of university students of a given school.
6. Future studies may explore the relationship among socio-demographic characteristics of different education levels, years of learning experience, communicative teaching approach, and English language acquisition.
7. The instrument of this study employed to measure social distance was modified from existing instruments. More elaborate measures can be

developed by future researchers to produce a richer coverage of social distance.

8. Future studies may replicate this research to examine the acquisition of English language proficiency in different socio-cultural contexts for comparative purposes. The possible meaning or the relative significance of learner factors, cooperative learning strategies, and the acquisition of English language proficiency, may differ from culture to culture.
9. There is larger cross-section of second language learners with homogenous characteristics that may verify the finding of this present research. This would result in a more realistic picture of English language acquisition process and confirm the external validity.
10. Future studies may explore the issues that were addressed in the context of this study for various instructional strategies in English language proficiency. Furthermore, the confirmatory factor analysis is proposed to simplify the factor structure of foreign language classroom anxiety.

REFERENCES

- Abdi, H. (2007). *Coefficients of correlation, alienation and determination*. Retrieved February 8, 2007, from <http://www.utdallas.edu/~herve/Abdi-Correlation2007-pretty.pdf>
- Alcon, E. (1998). Input and input processing in second language acquisition. *IRAL, International Review of Applied Linguistics in Language Teaching*, 36(4), 343, 19 pgs. Retrieved September 12, 2005, from ProQuest database.
- Becker, A. L. (1991). Language and languaging. *Language & Communication*, 11(1/2), 33-35.
- Beiser, M., & Hou, F. (2000). Gender differences in language acquisition and employment consequences among Southeast Asian refugees in Canada. *Canadian Public Policy—Analyse De Politiques*, 26(3). Retrieved February 10, 2007, from <http://economics.ca/cgi/jab?journal=cpp&view=v26n3/CPpv26n3p311.pdf>
- Brawner, C. E., & Felder, R. M. (2001). *1999-2000 Succeed faculty survey of teaching practices and perceptions of institutional attitudes toward teaching*. Retrieved May 3, 2006, from http://www.ncsu.edu/felder-public/Papers/99faculty_survey.pdf
- Brown, H. D. (2004). *Language assessment: Principles and classroom practices*. White Plains, NY: Pearson Education, Inc.
- Brown, J. D. (2004). *Detailed description of several standard measures of language aptitude*. Retrieved June 10, 2006, from http://www.dlielc.org/bilc/ConferenceNote/2004/Canada_2004/DAPPAppendix11.pdf

- Chafe, A. (1998). *Cooperative learning and the second language classroom*. Retrieved October 6, 2003, from <http://www.cdli.ca/~achafe/cooplang.html>
- Chomsky, N. (1972). *Language and mind*. New York: Harcourt Brace Jovanovich.
- Christison, M. A. (1990). Cooperative learning in the EFL classroom. *English Teaching Forum*, 28(4), 6-9.
- Chamot, A. U., & O' Malley, J. M. (1994). *The CALLA handbook: Implementing the cognitive academic language learning approach*. NY: Addison-Wesley Publishing Company.
- Cohen, A. D. (1994). *Assessing language ability in the classroom*. Boston, MA: Heinle & Heinle Publishers.
- Cohen, A. D. (1998). *Strategies in learning and using a second language*. NY: Addison Wesley Longman, Inc.
- Cohen, E. G., Brody, C. M., & Sapon-Shevin, M. (2004). *Teaching cooperative learning: The challenge for teacher education*. Albany, NY: State University of New York Press.
- Conrad, C. (2001). *Second language acquisition*. Retrieved October 6, 2003, from <http://members.tripod.com/~chris1066/methods.html>
- Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior*. New York: Plenum.
- DeCroix, M. (2001). *What are the main factors in second language acquisition?* Retrieved October 7, 2003, from <http://t3.preservice.org/T0210820/michelle.html>

- Dereshiwsky, M. I. (2001). *Foreign language anxiety of university students*. Retrieved April 25, 2006, from <http://www.highbeam.com/library/docfree.asp?DOCID=1G1:84017191&num=5&ctrlInfo=Round19%3AMode19a%3ASR%3AResult&ao=&FreePremium=BOTH>
- H
- Dumas, A. (2006). *Cooperative learning*. Retrieved February 10, 2007, from <http://www.cde.ca.gov/sp/el/er/cooplmg.asp>
- Ebert, O. & Hawk, W. (1998). *ESL start-up kit*. Presented by The Center for Literacy Studies. Retrieved October 2, 2003, from the ESL Institute. <http://cls.coe.utk.edu/lpm/esltoolkit/>
- Flege, J. (1999). *Age of leaning and second language speech*. Mahwah, NJ: Lawrence Erlbaum Associates, Inc.
- Freeman, Y. S., & Freeman, D. E. (1998). *ESL/EFL teaching principles for success*. Portsmouth, NH: Heinemann.
- Gardner, R. C. (1985). *Social psychology and second language learning: The role of attitudes and motivation*. London: Edward Arnold.
- Gardner, R. C. (1985). *The Attitude/Motivation Test Battery: Technical report*. Retrieved May 2, 2006, from <http://publish.uwo.ca/~gardner/AMTBmanualforwebpage.pdf>
- Geen, R. G. (1991). Social motivation. *Annual Review of Psychology*, 42(1), 377-399.
- Gass, S. M., & Selinker, L. (2001). *Second language acquisition: An introductory course*. Mahwah, NJ: Lawrence Erlbaum Associates, Inc.
- George, D., & Mallery, P. (2006). *SPSS for Windows step by step: A simple guide and reference* (6th ed.). Needham Heights, NJ: Allyn & Bacon.

- Greenfield, R. (2003). *Collaborative E-mail exchange for teaching secondary ESL: A case study in Hong Kong* 7(1). Retrieved May 3, 2006, from <http://lilt.msu.edu/vol7num1/pdf/greenfield.pdf>
- Gregg, K. (1984). Krashen's monitor and Occam's razor. *Applied Linguistics*, 5(2), 79-100.
- Harley, B. (1987). *Age in second language acquisition*. San Diego: Colege-Hill Press.
- Hayes, L. M. (2002). *Communicative competence in second language acquisition*. Retrieved October 5, 2003, from <http://www.arches.uga.edu/~hayesl/communicativecompetence.html>
- Haynes, J. (2005). *Stages of second language acquisition*. Retrieved February 11, 2006, from http://www.everythingsl.net/inservices/language_stages.php
- Johnson, D. W., & Johnson, R. T. (1999). *Learning together and alone: Cooperative, competitive, and individualistic learning*. Boston, MA: Allyn & Bacon.
- Johnson, D. W., Johnson, R. T., & Holubec, E. J. (1993). *Circles of learning: Cooperation in the classroom*. Edina, MN: Interaction Book Company.
- Johnson, D. W., & Johnson, R. T. (1994). *Leading the cooperative school*. Edina, MN: Interaction Book Company.
- Johnson, D. W., & Johnson, R. T. (1990). *Cooperation and competition: Theory and research*. Edina, MN: Interaction Book Company.
- Johnson, D. W. (1992). *Advanced cooperative learning*. Edina, MN: Interaction Book Company.

- Johnson, D. W., Johnson, R. T., & Stanne, M. B. (2000). Cooperative learning methods: A meta-analysis. *Methods of cooperative learning: What can we prove works*. Minneapolis, MN: University of Minnesota.
- Krashen, S. D. (1982). *Principles and practice in second language acquisition*. Elmsford, NY: Pergamon Press Inc.
- Krashen, S. D. (1985). *The input hypothesis: Issues and implications*. NY: Longman Inc.
- Krashen, S. D. (1987). *Principles and practice in second language acquisition*. Englewood Cliffs, NJ: Prentice Hall Inc.
- Krashen, S. D. (1988). *Second language acquisition and second language learning*. Englewood Cliffs, NJ: Prentice Hall Inc.
- Krashen, S. D. (2003). *Explorations in language acquisition and use*. Portsmouth, NH: Heinemann.
- Leech, N. L., Barrett, K. C., & Morgan, G. A. (2005). *SPSS for intermediate statistics use and interpretation* (2nd ed.). Mahwah, NJ: Lawrence Erlbaum Associates, Inc.
- Long, M. (1990). Maturation constraints on language development. *Studies in Second Language Acquisition*, 12(3), 251-285.
- Mason, K. (2006). *Teaching English in the two year college*. The National Council of Teachers of English, 34(1). Retrieved February 9, 2007, from http://www.ncela.gwu.edu/newsline/archives/2006/10/new_report_coop.html
- McCafferty, S. G., Jacobs, G. M., & Iddings, A. C. D. (2006). *Cooperative learning and second language teaching*. New York, NY: Cambridge University Press.

- Norris-Holt, J. (2001). Motivation as a contributing factor in second language acquisition. *The Internet TESL Journal*, 7(6). Retrieved October 2, 2003, from <http://iteslj.org/Articles/Norris-Motivation.html>
- Pimsleur, P. (1966). *Pimsleur Language Aptitude Battery*. Retrieved May 26, 2006, from <http://www.2lti.com/htm/plab.htm>
- Pimsleur, P. (1966). Pimsleur Language Aptitude Battery. *Wikipedia*. Retrieved August 10, 2006, from http://en.wikipedia.org/wiki/Pimsleur_Language_Aptitude_Battery
- Pimsleur, P., Reed, D. J., & Stansfield, C. W. (2004). *Pimsleur Language Aptitude Battery and manual 2004 edition*. Bethesda, MD: Second Language Testing, Inc.
- Richard-Amato, P. A. (2003). *Making it happen: From interactive to participatory language teaching*. NY: Pearson Education, Inc.
- Rodgers, T. S. (2001). Language teaching methodology. *CAL Digests*. Washington, DC: CAL Center for Applied Linguistics.
- Sherman, L. W. (2000). *Sociometry in the classroom: How to do it*. Retrieved April 26, 2006, from http://www.users.muohio.edu/shermalw/sociometryfiles/SOCIO_variation.htmlx
- Skehan, P. (1989). *Individual differences in second-language learning*. London: Edward Arnold.
- Slavin, R. (1995). *Cooperative Learning: Theory, research and practice* (2nd ed.). Boston: Allyn & Bacon.
- Trochim, W. M. (2005). *Research methods knowledge base*. Retrieved April 10, 2006, from <http://www.socialresearchmethods.net/kb/>

Trochim, W. M. (2006). *Research methods knowledge base-Signal group threats*.

Retrieved February 18, 2007, from

<http://www.socialresearchmethods.net/kb/intsing.php>

Von Wörde, R. (2003). *Student's perspectives on foreign language anxiety*. Retrieved

April 27, 2006, from

<http://www.vccaedu.org/inquiry/inquiry-spring2003/i-81-worde.html>

Zwiers, J. (1999). *Second language acquisition*. Retrieved October 10, 2003, from

<http://www.handheldeducation.com/readingscene/abc/index.html>

BIBLIOGRAPHY

- Achiba, M. (2003). *Learning request in a second language*. Tonawanda, NY: Multilingual Matters Ltd.
- American Psychological Association. (2001). *Publication manual of the American Psychological Association* (5th ed.). Washington, DC: Author.
- Best, J. W., & Kahn, J. V. (2006). *Research in education* (10th ed.). Boston, MA: Allyn & Bacon.
- Carroll, J. B., & Sapon, S. M. (1959). *MLAT sample questions*. Retrieved May 3, 2006, from <http://www.2lti.com/Docs/PDF/MLATSamples.pdf>
- Carroll, J. B., & Sapon, S. M. (1959). *Modern Language Aptitude Test and manual (MLAT)*. Retrieved May 3, 2006, from <http://www.utpjournals.com/product/cmlr/582/Modern-1.html>
- Chamot, A. U., & Robbins, J. (2005). *The CALLA model: Strategies for ELL student success*. Retrieved March 22, 2006, from <http://jillrobbins.com/gwu/CALLAHandout.pdf>
- Clarke, M. A., Davis, A., Rhodes, L. K., & Baker, E. D. (1998). Principles of collaboration in school-university partnerships. *TESOL Quarterly*, 32(3), 592-600.
- Cummins, J. (2000). *Language, power and pedagogy: Bilingual children in the crossfire*. Tonawanda, NY: Multilingual Matters Ltd.
- Cummins, J. (2001). *An introductory reader to the writings of Jim Cummins*. Tonawanda, NY: Multilingual Matters Ltd.

- Cooper, J., & Robinson, P. (2002). Research and theory in cooperative learning. *Cooperative Learning and College Teaching Newsletter*. Retrieved October 6, 2003, from http://www.csudh.edu/soe/cl_network/RTinCL.html
- Dörnyei, Z. (2003). *Questionnaires in second language research*. Mahwah, NJ: Lawrence Erlbaum Associates, Inc.
- Dumas, A. (2003). *Cooperative learning: Response to diversity*. Retrieved October 6, 2003, from <http://www.cde.ca.gov/iasa/cooplrng2.html>
- Eckman, F. R., Highland, D., Lee, P. W., Mileham, J., & Weber, R. R. (1995). *Second language acquisition theory and pedagogy*. Mahwah, NJ: Lawrence Erlbaum Associates, Inc.
- Fromkin, V., Rodman, R., & Hyams, N. (2003). *An introduction to language*. Boston, MA: Thomson Corporation.
- Gardner, R. C. (1985). *Quick Motivation Test*. Retrieved April 24, 2006, from <http://homepage.ntlworld.com/vivian.c/SLA/Motivation.htm>
- Gardner, R. C., Tremblay, P. F., & Masgoret, A.-M. (1997). Towards a full model of second language learning: An empirical investigation. *Modern Language Journal*, 81(3), 344-362.
- Gardner, R. C. (2005). *Integrative motivation and second language acquisition*. Retrieved August 4, 2006, from <http://publish.uwo.ca/~gardner/caaltalk5final.pdf>
- Gardner, R. C. (2005). *The socio-educational model of second language acquisition: A research paradigm*. Retrieved August 4, 2006, from <http://publish.uwo.ca/~gardner/euroslaDocument.pdf>

- Garson, D. (2006). *Factor analysis*. Retrieved July 12, 2006, from <http://www2.chass.ncsu.edu/garson/pa765/factor.htm>
- Gay, L. R., Mills, G. E., & Airasian P. W. (2006). *Educational research: Competencies for analysis and applications* (8th ed.). Englewood Cliffs, NJ: Prentice Hall.
- Herrera, S. G., & Murry, K. G. (2005). *Mastering ESL and bilingual methods*. Boston, MA: Pearson Education, Inc.
- Jacob, E., Rottenberg, L., Patrick, S. K., & Wheeler, E. (1996). Cooperative learning: context and opportunities for acquiring academic English. *TESOL Quarterly*, 30(2), 253-280.
- Jacob, G., & Hall, S. (1994). Implementing cooperative learning. *English Teaching Forum*. 32(4), 2-6.
- Johnson, D. W., Johnson, R. T., & Holubec, E. J. (1994). *The new circles of learning cooperation in the classroom and school*. Alexandria, VA: Association for Supervision and Curriculum.
- Johnson, D. W., Johnson, R. T., & Holubec, E. J. (1994). *Cooperative learning in the classroom*. Alexandria, VA: Association for Supervision and Curriculum.
- Johnson, D. W., Johnson, R. T., Bartlett, J. K., & Johnson, L. M. (1988). *Our cooperative Classroom*. Edina, MN: Interaction Book Company.
- Johnson, R. K. (1989). *The second language curriculum*. New York, NY: Cambridge University Press.
- Kiyamazarslam, V. (2004). *The role of receptive skills in enhancing second language acquisition*. Retrieved October 1, 2004, from http://maxpages.com/thena/Leisure_Time_Activities

- Klingner, J. K., & Vaughn, S. (2000). The helping behaviors of fifth graders while using collaborative strategic reading during ESL content classes. *TESOL Quarterly*, 34(1), 69-98.
- Kumaravadivelu, B. (2006). TESOL methods: Changing tracks, challenging trends. *TESOL Quarterly*, 40(1), 59-81.
- Kondo-Brown, K. (2006). *Affective variables and Japanese L2 reading ability*. Retrieved May 6, 2006, from <http://www.nflrc.hawaii.edu/rfl/April2006/kondobrown/kondobrown.html>
- Lacorte, M. (2005). Teacher's knowledge and experience in the discourse of foreign-language classrooms. *Language Teaching Research*, 9(4), 381-402, London, Oct 2005. Retrieved September 28, 2005, from ProQuest database.
- Railsback, J. (2003). *Overview of second language acquisition theory*. Retrieved October 1, 2003, from the Northwest Regional Educational Laboratory <http://www.nwrel.org/request/2003may/overview.html>
- Ramirez, A.G. (1995). *Creating contexts for second language acquisition: Theory and methods*. White Plains, NY: Longman Publishers USA.
- Rodolico, J. T. (2002). Teaching cognitive learning strategies and vocabulary testing. *Hwa Kang Journal of TEFL*, 8(2). Retrieved September 28, 2003, from <http://www.geocities.com/CollegePark/Classroom/1930/Journal/May2002/Rodolico-Teaching.html>
- Ronkowski, S. (2003). *Using cooperative learning groups*. Retrieved October 6, 2003, from <http://www.id.ucsb.edu/IC/TA/hdbk/ta3-5.html>

Saville-Troike, M. (2005). *Introducing second language acquisition*. New York, NY: Cambridge University Press.

Shannon, F. (2005). *The input hypothesis*. Retrieved March 22, 2006, from <http://fredshannon.blogspot.com/2005/11/input-hypothesis.html>

Singleton, D., & Lengyel, Z. (1995). *The age factor in second language acquisition*. Bristol, PA: Multilingual Matters Ltd.

Sparks, R. L., Ganschow, L., Artzer, M. E., Siebenhar, D., & Plageman, M. (2004). Foreign language teachers' perceptions of students' academic skills, affective characteristics, and proficiency: Replication and follow-up studies. *Foreign Language Annals*, 37(2), 263, 16 pgs. Retrieved September 12, 2005, from ProQuest database.

Towell, R., & Hawkins, R. (1994). *Approaches to second language acquisition*. Bristol, PA: Longdunn Press.

Twyford, C. W. (1988). *Age-related factors in second language acquisition*. National Clearinghouse for English Language Acquisition. Retrieved October 6, 2003, from the ERIC Clearinghouse on Urban Education <http://www.ncela.gwu.edu/pubs/classics/focus/02bage.htm>

Walqui, A. (2000). *Contextual factors in second language acquisition*. ERIC Digest ED444381. Retrieved October 6, 2003, from ERIC Clearinghouse on Language and Linguistics Washington DC http://eric.ed.gov/ERICDocs/data/ericdocs2/content_storage_01/00000000b/80/2a/31/03.pdf

White, L. (2003). *Second language acquisition and universal grammar*. New York, NY: Cambridge University Press.

Williams, A. F., Vanpatten, B., & Williams, J. (2006). *Theories in second language acquisition: An introduction*. Mahwah, NJ: Lawrence Erlbaum Associates, Inc.

Appendix A

What are the Differences?

WHAT ARE THE DIFFERENCES?

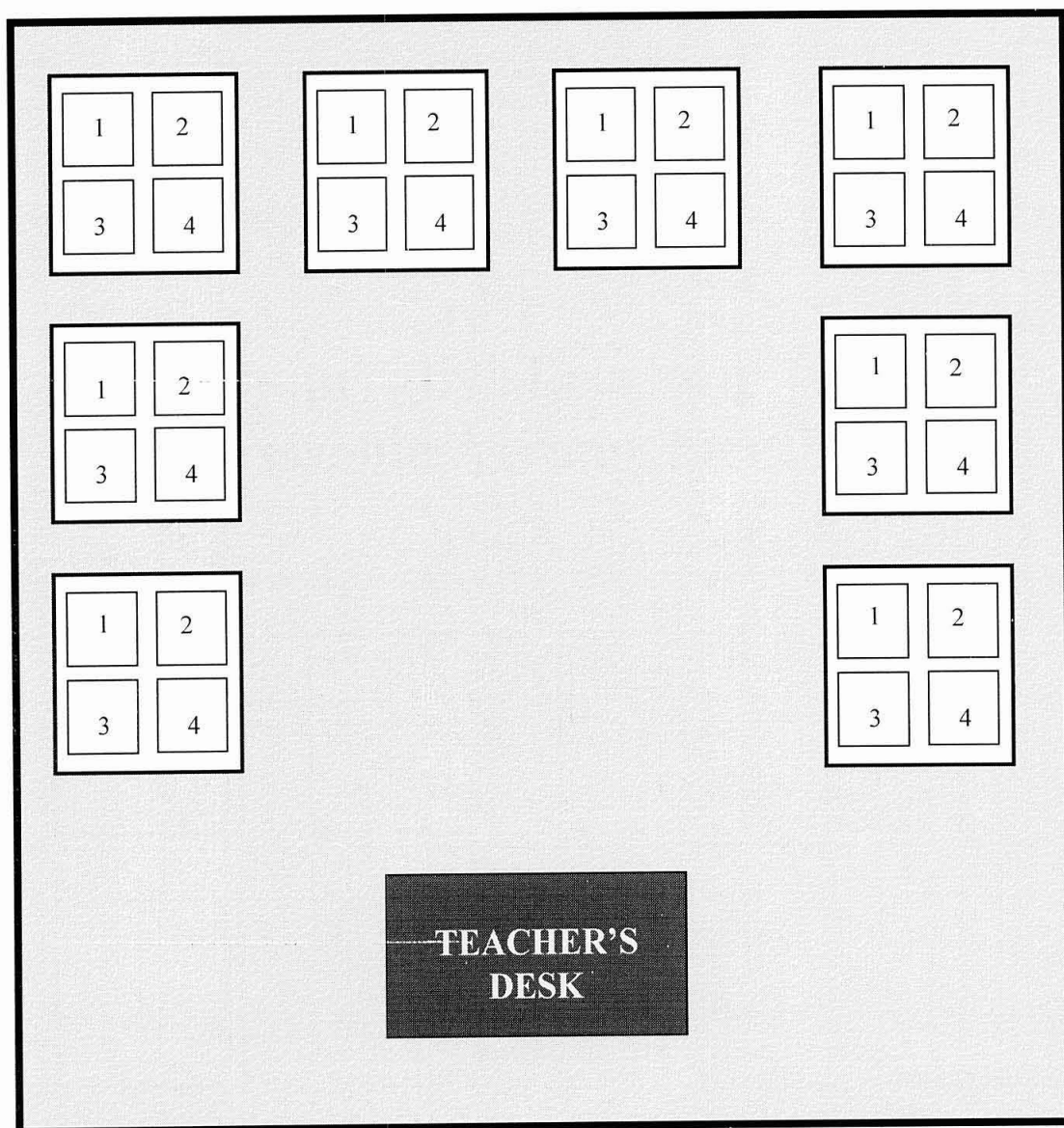
Cooperative Learning Groups	Traditional Learning Groups
Positive interdependence	No interdependence
Individual accountability	No individual accountability
Heterogeneous groups	Homogenous membership
Shared leadership	One appointed leader
Responsible for each other	Responsible only for self
Working and social skills emphasized	Only working skills emphasized
Necessary group skills taught	Group skills assumed and /or ignored
Teacher observes and Intervenes	Teacher ignores group functioning
Groups reflect on their effectiveness	No group reflections

Note. The figure is from "Circles of Learning: Cooperation in the Classroom," by D. W. Johnson, R. T. Johnson, E. J. Holubec, 1993, Association for Supervision and Curriculum. Copyright 1993 by Association for Supervision and Curriculum. Adapted with permission of the first author.

Appendix B

Cooperative Learning Classroom Arrangement

Cooperative Learning Classroom Arrangement



Note. The figure is from "Leading the Cooperative School," by D. W. Johnson, R. T. Johnson, 1994, Interaction Book Company. Copyright 1994 by Interaction Book Company. Adapted with permission of the first author.

Appendix C

Permission to Use Accessible Population

Appendix D

Authorization for Voluntary Consent

Lynn University
THIS DOCUMENT SHALL ONLY BE USED TO PROVIDE AUTHORIZATION FOR
VOLUNTARY CONSENT

**PROJECT TITLE: EFFECTIVENESS OF INSTRUCTIONAL STRATEGIES
EMPHASIZING COOPERATIVE LEARNING IN THE
ACQUISITION OF ENGLISH BY TAIWANESE UNIVERSITY
STUDENTS.**

Project IRB Number: 2006-037 **Lynn University, 3601 N. Military Trail Boca Raton, Florida**
33431

I, Mei-Ling Chen, am a doctoral student at Lynn University. I am studying Global Leadership, with a specialization in Educational Leadership. Part of my education is to conduct a research study.

DIRECTIONS FOR THE PARTICIPANT:

You are being asked to participate in my research study. Please read this carefully. This form provides you with information about the study. The Principal Investigator (Mei-Ling Chen) will answer all of your questions. Ask questions about anything you don't understand before deciding whether or not to participate. You are free to ask questions at any time before, during, or after your participation in this study. Your participation is entirely voluntary and you can refuse to participate without penalty or loss of benefits to which you are otherwise entitled.

PURPOSE OF THIS RESEARCH STUDY: The study is about effectiveness of instructional strategies emphasizing cooperative learning in the acquisition of English by Taiwanese university students. There will be approximately 3420 numbers of people invited to the study. Participants represent that they are at least 18 years of age, and that they do not have medical problems or language or educational barriers that precludes understanding of explanations contained in this authorization for voluntary consent. Participants are second language learners who are studying the daytime Fortune Institute of Technology of Kaohsiung in Taiwan. Participants must be able to listen, speak, read, and writing English.

Institutional Review Board for the Protection of Human Subjects
Lynn University
3601 N. Military Trail Boca Raton, Florida 33431

PROCEDURES: All participants invited to participate in the online survey via e-mail that provides explanation of the research, consent information, and a hyper-link to the survey web site. If you give your consent to participate in the online survey by clicking on agree bottom below, which will take you to the survey. You will first complete a socio-demographic profile. Then you will be asked to complete 68 questions about learner factors questionnaire and English language acquisition questionnaire. These two surveys should take 10 minutes to complete. You will finish the survey in private and the web site is unable to track the IP address or collect any identification information linking the participant to the survey data. The data will be kept confidential and stored electronically on "password protected" computers. The data will be destroyed after five years. All responses will be reported as a group. Therefore, the researcher will not know who is participating in the survey and who is not. The identity of participants will be protected to the degree allowed by technology and will be anonymous to the researcher.

POSSIBLE RISKS OR DISCOMFORT: This study involves minimal risk. You may find that some of the questions are sensitive in nature. However, participation in this study requires a minimal amount of your time and effort.

POSSIBLE BENEFITS: There may be no direct benefit to you in participating in this research. But knowledge may be gained which may help in future studies regarding the relationship between learner factors, cooperative learning strategies and development of four language skills in English language acquisition proficiency for Taiwanese students.

FINANCIAL CONSIDERATIONS: There is no financial compensation for your participation in this research. There are no costs to you as a result of your participation in this study.

ANONYMITY: Anonymity will be maintained to the degree permitted by the technology used. Specifically, no guarantees can be made regarding the interception of data sent via the Internet by any third parties. The researcher will not identify you and data will be reported as "group" responses. Participation in this survey is voluntary and return of the completed survey will constitute your informed consent to participate. Your e-mail address, IP address, and individual responses will not be identified nor tracked as part of data collection. The data will be kept confidential and stored electronically on "password protected" computers. The data will be destroyed after five years.

The results of this study may be published in a dissertation, scientific journals or presented at professional meetings. In addition, your individual privacy will be maintained in all publications or presentations resulting from this study.

Institutional Review Board for the Protection of Human Subjects
Lynn University
3601 N. Military Trail Boca Raton, Florida 33431

RIGHT TO WITHDRAW: You are free to choose whether or not to participate in this study. There will be no penalty or loss of benefits to which you are otherwise entitled if you choose not to participate.

CONTACTS FOR QUESTIONS/ACCESS TO CONSENT FORM: Any further questions you have about this study or your participation in it, either now or any time in the future, will be answered by Mei-Ling Chen (Principal Investigator) who may be reached at: Taiwan Tel. No. [REDACTED] or America Tel. No. [REDACTED] or email to [REDACTED] and Dr. William Leary, faculty advisor who may be reached at: [REDACTED] or email to [REDACTED]. For any questions regarding your rights as a research subject, you may call Dr. Farideh Farazmand, Chair of the Lynn University Institutional Review Board for the Protection of Human Subjects, at [REDACTED] or email to [REDACTED]. If any problems arise as a result of your participation in this study, please call the Principal Investigator (Mei-Ling Chen) and the faculty advisor (Dr. William Leary) immediately.

You may print off a copy of this consent form.

INVESTIGATOR'S AFFIDAVIT: I hereby certify that a written explanation of the nature of the above project has been provided to the person participating in this project. A copy of the written documentation provided is attached hereto. By the person's consent to voluntary participate in this study, the person has represented that he/she is at least 18 years of age, and that he/she does not have a medical problem or language or educational barrier that precludes his/her understanding of my explanation. Therefore, I hereby certify that to the best of my knowledge the person participating in this project understands clearly the nature, demands, benefits, and risks involved in his/her participation.

Mei-Ling Chen

Signature of Investigator

Date of IRB Approval: 12/06/06

Expiration Date: 12/06/07 . 7.7.

Yes, I agree to participate in this study.

No, I am not interested in this study.

Institutional Review Board for the Protection of Human Subjects
Lynn University
3601 N. Military Trail Boca Raton, Florida 33431

Appendix E
Authorization for Voluntary Consent
(Chinese Version)

林恩大學
本文件只適用於提供授權給自願參與的同意書

研究計劃的主題: 有效率的教學策略強調合作學習在英語的習得以台灣大學生為對象

研究計劃 IRB 號碼: _____ 林恩大學 3601 N. Military Trail Boca Raton, Florida 33431

2006-037

本人 陳美玲，是美國林恩大學博士班的學生。目前正在研究全球性之領導統御之議題，我的主修是教育領導。此一學術研究是我教育學習的一個重要階段，真誠的邀請您參與這份研究計畫。

參與者須知:

您被邀請參與這份研究計畫，以下內容將提供您關於這份研究的相關資料，請仔細閱讀。主要研究員(陳美玲)將回答您所有問題，若有任何疑問，請務必在決定參與前提出。您可以在參與此學術研究之前後或進行當中自由發問。您的參與是完全自願性的，您可以拒絕參與這個研究調查而不用擔心任何權益上的損失或懲罰。

研究目的: 這份研究是有關於有效率的教學策略強調合作學習在英語的習得以台灣大學生為對象。預估將有三千四百二十名學生被邀請參與此次研究。參加者必須為自願性且年滿十八歲以上之成人，並且沒有醫療問題，語言或教育的障礙去瞭解自願授權書內的說明。此次研究對象為臺灣高雄市和春技術學院的日間部大學生。參加者必須能夠聽、說、讀、寫英文。

過程: 研究員將以電子郵件邀請所有的大學生參加這份網路問卷調查。這封電子郵件包括邀請函、同意書、問卷調查的目的及程序、以及連結到網路問卷調查的網站。如果您同意參加這份網路問卷調查，請您點選同意的選項，連結到網路問卷調查的網站。這份問卷將分為二個部分，第一部分是填寫有關您的一些基本資料，第二部分您將回答一份有六十八個問題的問卷關於影響語言學習者因素，以及英文語言習得。整份問卷大概需要十分鐘即可完成。這份問卷將採匿名方式進行，而且網站不會追蹤您的 IP 位址，也不會收集任何足以辨認身分之個人資料。這份資料將以機密方式保存並且以電子檔儲存在密碼保護的電腦。這份資料將在五年後被銷毀。所有資料將集體整理。因此，研究員將無法知道誰完成這份網路問卷調查。您的身份將受到研究員以匿名方式保護。

可能性之風險或不適感: 此研究牽涉極微小之風險，但您可能會覺得有些問題比較敏感。此外，參與這份問卷調查將佔用您少量的時間和心力。

Institutional Review Board for the Protection of Human Subjects
Lynn University
3601 N. Military Trail Boca Raton, Florida 33431

可能性之受益: 參與這次研究，您將無法直接受益。但研究結果所獲得的知識將幫助老師更瞭解影響台灣學生英文語言學習的因素，如何運用合作學習的策略和四個語言技巧在英文語言的習得。

財務考量: 參與這次研究您將不會獲得金錢上的報酬，但也不會造成您任何損失。

匿名: 本問卷採匿名方式進行，您的身分將無法辨認，所有資料將集體整理。參與這份研究是自願性的，問卷的填寫及寄回將視同您同意參與此學術研究。網站將不會追蹤您的電子郵件住址，IP 位址，也不會收集任何足以辨認身分之個人資料。這份資料將以機密方式保存並且以電子檔儲存在密碼保護的電腦。這份資料將在五年後被銷毀。

這份研究報告結果將可能發表於論文、學術期刊或學術會議。此外，您的個人隱私在所有發表刊物上將受到同等的保護。

撤銷之權利: 您可以自由選擇是否參與此學術研究，若您選擇不參與，將不會導致任何懲罰或權利上的損失。

相關問題的聯絡人: 現在或者未來的任何時間，你有任何進一步與此學術研究相關的問題，將由主要研究員陳美玲(聯絡電話: 04-8732461 or [redacted] or email to [redacted])或此研究之指導教授 Dr. William Leary (聯絡電話: [redacted] or email [redacted]) 回答。任何關於此研究之權益問題，您亦可連絡 Lynn University IRB 主席 Dr. Farazmand (聯絡電話: [redacted] or email to [redacted])。若您因參與此研究而導致任何困擾，請立即通知主要研究員陳美玲以及研究指導教授 Dr. William Leary。此外，您將收到此一同意書之副本。

研究員的宣誓書: 我已經謹慎周詳的向參與者說明此次的研究計畫，我也確認過參與者的年紀年滿十八歲，並且沒有任何醫療上的問題與語言或教育的障礙，來影響參與者理解我的說明。我藉此保證在我的最佳認知之下，參與者已清楚瞭解此一研究計畫的本質、需求以及所有參與過程所牽涉的利益及風險。

研究者的簽名 [redacted]

IRB 核准日期: 12/06/06

Expiration Date: 12/06/07

是的, 我同意參加此學術研究。

不, 我沒興趣參加此學術研究。

Institutional Review Board for the Protection of Human Subjects
Lynn University
3601 N. Military Trail Boca Raton, Florida 33431

Appendix F

Print Outs of Online Authorization for Voluntary Consent

林恩大學

本文件只適用於提供授權給自願參與的同意書

研究計劃的主題: 有效率的教學策略強調合作學習在英語的習得以台灣大學生為對象
研究計劃IRB 號碼: 2006-037 林恩大學 3601 N. Military Trail Boca Raton, Florida 33431

本人 陳美玲，是美國林恩大學博士班的學生。目前正在研究全球性之領導統御之議題，我的主修是教育領導。此一學術研究是我教育學習的一個重要階段，真誠的邀請您參與這份研究計畫。

參與者須知:

您被邀請參與這份研究計畫，以下內容將提供您關於這份研究的相關資料，請仔細閱讀。主要研究員(陳美玲)將回答您所有問題，若有任何疑問，請務必在決定參與前提出。您可以在參與此學術研究之前後或進行當中自由發問。您的參與是完全自願性的，您可以拒絕參與這個研究調查而不用擔心任何權益上的損失或懲罰。

研究目的: 這份研究是有關於有效率的教學策略強調合作學習在英語的習得以台灣大學生為對象。預估將有三千四百二十名學生被邀請參與此次研究。參加者必須為自願性且年滿十八歲以上之成人，並且沒有醫療問題，語言或教育的障礙去瞭解自願授權書內的說明。此次研究對象為臺灣高雄市和春技術學院的日間部大學生。參加者必須能夠聽、說、讀、寫英文。

過程: 研究員將以電子郵件邀請所有的大學生參加這份網路問卷調查。這封電子郵件包括邀請函、同意書、問卷調查的目的及程序、以及連結到網路問卷調查的網站。如果您同意參加這份網路問卷調查，請您點選同意的選項，連結到網路問卷調查的網站。這份問卷將分為二個部分，第一部分是填寫有關您的一些基本資料，第二部分您將回答一份有六十八個問題問卷關於影響語言學習者因素，以及英文語言習得。整份問卷大概需要十分鐘即可完成。這份問卷將採匿名方式進行，而且網站不會追蹤您的IP位址，也不會收集任何足以辨認身分之個人資料。這份資料將以機密方式保存並且以電子檔儲存在密碼保護的電腦。這份資料將在五年後被銷毀。所有資料將集體整理。因此，研究員將無法知道誰完成這份網路問卷調查。您的身份將受到研究員以匿名方式保護。

可能性之風險或不適感: 此研究牽涉極微小之風險，但您可能會覺得有些問題比較敏感。此外，參與這份問卷調查將佔用您少量的時間和心力。

可能性之受益: 參與這次研究，您將無法直接受益。但研究結果所獲得的知識將幫助老師更瞭解影響台灣學生英文語言學習的因素，如何運用合作學習的策略和四個語言技巧在英文語言的習得。

財務考量: 參與這次研究您將不會獲得金錢上的報酬，但也不會造成您任何損失。

匿名: 本問卷採匿名方式進行，您的身分將無法辨認，所有資料將集體整理。參與這份研

究是自願性的，問卷的填寫及寄回將視同您同意參與此學術研究。網站將不會追蹤您的電子郵件住址，IP位址，也不會收集任何足以辨認身分之個人資料。這份資料將以機密方式保存並且以電子檔儲存在密碼保護的電腦。這份資料將在五年後被銷毀。

這份研究報告結果將可能發表於論文、學術期刊或學術會議。此外，您的個人隱私在所有發表刊物上將受到同等的保護。

撤銷之權利: 您可以自由選擇是否參與此學術研究，若您選擇不參與，將不會導致任何懲罰或權利上的損失。

相關問題的聯絡人: 現在或者未來的任何時間，你有任何進一步與此學術研究相關的問題，將由主要研究員陳美玲([redacted]) or email to [redacted]) 或此研究之指導教授 Dr. William Leary (聯絡電話 [redacted] or [redacted]) 回答。任何關於此研究之權益問題，您亦可連絡 Lynn University IRB 主席 Dr. Farazmand (聯絡電話 [redacted] or email to [redacted])。若您因參與此研究而導致任何困擾，請立即通知主要研究員陳美玲以及研究指導教授 Dr. William Leary。此外，您將收到此一同意書之副本。

研究員的宣誓書: 我已經謹慎周詳的向參與者說明此次的研究計畫，我也確認過參與者的年說明。我藉此保證在我的最佳認知之下，參與者已清楚瞭解此一研究計畫的本質、需求以及所有參與過程所牽涉的利益及風險。

研究者的簽名: 陳美玲 IRB核准日期: 12/06/06

是的, 我同意參加此學術研究。(按此進入)

不, 我沒興趣參加此學術研究。(按此退出)

Lynn University

**THIS DOCUMENT SHALL ONLY BE USED TO PROVIDE AUTHORIZATION FOR
VOLUNTARY CONSENT**

PROJECT TITLE: EFFECTIVENESS OF INSTRUCTIONAL STRATEGIES

EMPHASIZING COOPERATIVE LEARNING IN THE

ACQUISITION OF ENGLISH BY TAIWANESE UNIVERSITY STUDENTS.

Project IRB Number: 2006-037 Lynn University, 3601 N. Military Trail Boca Raton, Florida
33431

I, Mei-Ling Chen, am a doctoral student at Lynn University. I am studying Global Leadership,
with a specialization in Educational Leadership. Part of my education is to conduct a research
study.

DIRECTIONS FOR THE PARTICIPANT:

You are being asked to participate in my research study. Please read this carefully. This form provides
you with information about the study. The Principal Investigator (Mei-Ling Chen) will answer all of
your questions. Ask questions about anything you don't understand before deciding whether or not
to participate. You are free to ask questions at any time before, during, or after your participation in
this study. *Your participation is entirely voluntary and you can refuse to participate without penalty or
loss of benefits to which you are otherwise entitled.*

PURPOSE OF THIS RESEARCH STUDY: The study is about effectiveness of instructional
strategies emphasizing cooperative learning in the acquisition of English by Taiwanese university
students. There will be approximately 3420 numbers of people invited to the study. Participants
represent that they are at least 18 years of age, and that they do not have medical problems or
language or educational barriers that precludes understanding of explanations contained in this
authorization for voluntary consent. Participants are second language learners who are studying the
daytime Fortune Institute of Technology of Kaohsiung in Taiwan. Participants must be able to listen,
speak, read, and writing English.

PROCEDURES: All participants invited to participate in the online survey via e-mail that provides
explanation of the research, consent information, and a hyper-link to the survey web site. If you give
your consent to participate in the online survey by clicking on agree bottom below, which will take
you to the survey. You will first complete a socio-demographic profile. Then you will be asked to
complete 68 questions about learner factors questionnaire and English language acquisition
questionnaire. These two surveys should take 10 minutes to complete. You will finish the survey in
private and the web site is unable to track the IP address or collect any identification information
linking the participant to the survey data. The data will be kept confidential and stored electronically
on "password protected" computers. The data will be destroyed after five years. All responses will
be reported as a group. Therefore, the researcher *will not know who is participating in the survey and
who is not.* The identity of participants will be protected to the degree allowed by technology and will
be anonymous to the researcher.

POSSIBLE BENEFITS: There may be no direct benefit to you in participating in this research. But
*knowledge may be gained which may help in future studies regarding the relationship between learner
factors, cooperative learning strategies and development of four language skills in English language
acquisition proficiency for Taiwanese students.*

FINANCIAL CONSIDERATIONS: There is no financial compensation for your participation in
this research. There are no costs to you as a result of your participation in this study.

ANONYMITY: Anonymity will be maintained to the degree permitted by the technology used. Specifically, no guarantees can be made regarding the interception of data sent via the Internet by any third parties. The researcher will not identify you and data will be reported as "group" responses. Participation in this survey is voluntary and return of the completed survey will constitute your informed consent to participate. Your e-mail address, IP address, and individual responses will not be identified nor tracked as part of data collection. The data will be kept confidential and stored electronically on "password protected" computers. The data will be destroyed after five years.

The results of this study may be published in a dissertation, scientific journals or presented at professional meetings. In addition, your individual privacy will be maintained in all publications or presentations resulting from this study.

RIGHT TO WITHDRAW: You are free to choose whether or not to participate in this study. There will be no penalty or loss of benefits to which you are otherwise entitled if you choose not to participate.

CONTACTS FOR QUESTIONS/ACCESS TO CONSENT FORM: Any further questions you have about this study or your participation in it, either now or any time in the future, will be answered by Mei-Ling Chen (Principal Investigator) who may be reached at: Taiwan Tel. No. [REDACTED] or America Tel. [REDACTED] or email to [REDACTED] and Dr. William Leary, faculty advisor who may be reached at: [REDACTED] or email to [REDACTED]. For any questions regarding your rights as a research subject, you may call Dr. Farideh Farazmand, Chair of the Lynn University Institutional Review Board for the Protection of Human Subjects, at [REDACTED] or email to [REDACTED]. If any problems arise as a result of your participation in this study, please call the Principal Investigator (Mei-Ling Chen) and the faculty advisor (Dr. William Leary) immediately.

You may print off a copy of this consent form.

INVESTIGATOR'S AFFIDAVIT: I hereby certify that a written explanation of the nature of the above project has been provided to the person participating in this project. A copy of the written documentation provided is attached hereto. By the person's consent to voluntary participate in this study, the person has represented that he/she is at least 18 years of age, and that he/she does not have a medical problem or language or educational barrier that precludes his/her understanding of my explanation. Therefore, I hereby certify that to the best of my knowledge the person participating in this project understands clearly the nature, demands, benefits, and risks involved in his/her participation.

Signature of Investigator: Mei-Ling Chen

Date of IRB Approval: 12/06/06

☐ Yes, I agree to participate in this study.

☐ No, I am not interested in this study.

Appendix G

Certification of Translation of Authorization for Voluntary Consent

TRANSNATIONAL SERVICES, INC

215 S.W. 17th Avenue, Suite 205, Miami, FL 33135

Tel : (305) 271-2858 Fax: (678) 795-0889

E-mail: Translate5@aol.com

CERTIFICATE OF ACCURACY

STATE OF FLORIDA)

) SS:

COUNTY OF DADE)

Mr. Haiyan Wang, a certified Chinese and Russian translator and interpreter for U.S. Department of State, Federal Courts, Miami Immigration Courts, Miami-Dade and Broward County Courts and a member in good standing of the American Translators Association (ATA), being duly sworn, deposes and says,

That he is fluent in both the English and the Chinese languages.

That he has translated the annexed documents from the English into the Chinese language described as **Directions For The Participant** consisting of 2 pages for the entire document, that this is a true and complete translation to the best of his knowledge, ability and belief.

FURTHER AFFIANT SAYETH NOT

[Redacted Signature]

Haiyan Wang (Translator)

SUBSCRIBED AND SWORN TO before me at Miami-Dade County, Florida on this 29th day of November, 2006

[Redacted Signature]

Jian Yu

Notary Public (Seal)

My Commission Expires:



JIAN YU
MY COMMISSION # DD 506995
EXPIRES: February 26, 2010
Bonded Thru Budget Notary Services

Appendix H

IRB Approval



Lynn University

Principal Investigator: Mei-Ling Chen

Project Title: Effectiveness of Instructional Strategies Emphasizing Cooperative Learning in the Acquisition of English by Taiwanese University Students

IRB Project Number 2006-037:

IRB ACTION by the CONVENED FULL BOARD :

Date of IRB Review of Application and Research Protocol: 12/06/06

IRB ACTION: Approved ☒ Approved w/provision(s) ☐ Not Approved ☐ Other ☐

COMMENTS:

Consent Required: No ☐ Yes ☒ Not Applicable ☐ Written ☒ Signed ☐

Consent forms must bear the research protocol expiration date of 12/06/07.

Application to Continue/Renew is due:

- 1) For a Convened Full-Board Review, two months prior to the due date for renewal ☒
- 2) For an Expedited IRB Review, one month prior to the due date for renewal ☐
- 3) For review of research with exempt status, one month prior to the due date for renewal ☐

Name of IRB Chair Farideh Farazmand

Signature of IRB Chair [REDACTED] Date: 12/06/06.

Cc. Dr. Leary

Institutional Review Board for the Protection of Human Subjects
Lynn University
3601 N. Military Trail Boca Raton, Florida 33431

Appendix I
Survey Instrument

Seven-Part Survey

Part 1: Socio-Demographic Profile

Directions: Please choose the category for each question that best describes you by placing an $\sqrt{}$ mark next to the items.

1. **Gender:** ☐ Male ☐ Female
2. **Age in Years:** ☐
3. **Education category:**
 - ☐ Four-year college graduate (Bachelor's Degree)
 - ☐ One to three years college (also business schools)
 - ☐ High school graduate
 - ☐ Ten to eleven years of school (part high school)
 - ☐ Seven to nine years of school (Junior high school)
 - ☐ Less than seven years of school (Elementary school)
4. **Years of experience learning English:**
 - ☐ One year
 - ☐ Two years
 - ☐ Three years
 - ☐ Four years
 - ☐ Five or more years

Part 2: Motivation

Motivational Intensity of the Attitude/Motivation Test (AMT)

Directions: Please choose the category for each question that best describes you by placing an \checkmark mark next to the items.

1. I actively think about what I have learned in my English class
☐ very frequently.
☐ hardly ever.
☐ once in awhile.
2. If English were not taught in school, I would
☐ pick up English in everyday situations (i.e., read English books and newspapers, try to speak it whenever possible, etc.).
☐ not bother learning English at all.
☐ try to obtain lessons in English somewhere else.
3. When I have a problem understanding something we are learning in English class, I
☐ immediately ask the teacher for help.
☐ only seek help just before the exam.
☐ just forget about it.
4. When it comes to English homework, I
☐ put some effort into it, but not as much as I could.
☐ work every carefully, making sure I understand everything.
☐ just skim over it.
5. Considering how I study English, I can honestly say that I
☐ do just enough work to get along.
☐ will pass on the basis of sheer luck or intelligence because I do very little work.
☐ really try to learn English.
6. If my teacher wanted someone to do an extra English assignment, I would
☐ definitely not volunteer.
☐ definitely volunteer.
☐ only do it if the teacher asked me directly.
7. After I get my English assignment back, I
☐ always rewrite them, correcting my mistakes.
☐ just throw them in my desk and forget them.
☐ look them over, but don't bother correcting mistakes.

8. When I am in English class, I
____ volunteer answers as much as possible.
____ answer only the easier questions.
____ never say anything.
9. If there were a local English T. V. station, I would
____ never watch it.
____ turn it on occasionally.
____ try to watch it often.
10. When I hear an English song on the radio, I
____ listen to the music, paying attention only to the easy words.
____ listen carefully and try to understand all the words.
____ change the station.

Note. The Motivational Intensity scale is from "The Attitude/Motivation Test Battery: Technical Report." by R. C. Gardner, 1985, University of Western Ontario. Copyright 1985 by University of Western Ontario. Used with permission of the first author.

Part 3: Anxiety

Foreign Language Classroom Anxiety Scale (FLCAS)

Directions: Please rate the anxiety in your English language learning classes where

SA=Strongly Agree

A=Agree

N=Neither Agree nor Disagree

D=Disagree

SD=Strongly Disagree

Select one response for each question.

	SA	A	N	D	SD
(1) I never feel quite sure of myself when I am speaking in my foreign language class.					
(2) I don't worry about making mistakes in language class.					
(3) I tremble when I know that I'm going to be called on in language class.					
(4) It frightens me when I don't understand what the teacher is saying in the foreign language.					
(5) It wouldn't bother me at all to take more foreign language classes.					
(6) During language class, I find myself thinking about things that have nothing to do with the course.					
(7) I keep thinking that the other students are better at languages than I am.					
(8) I am usually at ease during tests in my language class.					
(9) I start to panic when I have to speak without preparation in language class.					
(10) I worry about the consequences of failing my foreign language class.					
(11) I don't understand why some people get so upset over foreign language classes.					
(12) In language class, I can get so nervous I forget things I know.					
(13) It embarrasses me to volunteer answers in my language class.					
(14) I would not be nervous speaking in the foreign language with native speakers.					
(15) I get upset when I don't understand what the teacher is correcting.					

(16) Even if I am well prepared for language class, I feel anxious about it.					
(17) I often feel like not going to my language class.					
(18) I feel confident when I speak in foreign language class.					
(19) I am afraid that my language teacher is ready to correct every mistake I make.					
(20) I can feel my heart pounding when I'm going to be called on in language class.					
(21) The more I study for a language test, the more confused I get.					
(22) I don't feel pressure to prepare very well for language class.					
(23) I always feel that the other students speak the language better than I do.					
(24) I feel very self-conscious about speaking the foreign language in front of other students.					
(25) Language class moves so quickly I worry about getting left behind.					
(26) I feel more tense and nervous in my language class than in my other class.					
(27) I get nervous and confused when I am speaking in my language class.					
(28) When I'm on my way to language class, I feel very sure and relaxed.					
(29) I get nervous when I don't understand every word the language teacher says.					
(30) I feel overwhelmed by the number of rules you have to learn to speak a foreign language.					
(31) I am afraid that the other students will laugh at me when I speak the foreign language.					
(32) I would probably feel comfortable around native speakers of the foreign language.					
(33) I get nervous when the language teacher asks questions which I haven't prepared in advance.					

Note. The scale is from "FLCAS: A Multiple-item Scale for Measuring Levels of Anxiety," by E. K. Horwitz, M. B. Horwitz, J. Cope, 1986, *The Modern Language Journal*, 70 (2), pp. 125-132. Copyright 1986 by The Modern Language Journal. Used with permission of the first author.

Part 4: Language Aptitude

Pimsleur Language Aptitude Battery (PLAB)

Directions: In each of the following questions, select the letter of the synonym.

Sample: Prolonged

(a) prompt (b) decreased (c) difficult (d) extended

You would select "(d)" because the "extended" is the same meaning with "prolonged".

1. fruitless
(a) intentional (b) successful (c) profitable (d) ineffectual
1. jovial
(a) somber (b) merry (c) satisfied (d) fatigued
2. vigorous
(a) weak (b) sickly (c) strong (d) vigilant
3. malicious
(a) thirsty (b) beneficent (c) wicked (d) charitable
5. vivacious
(a) lively (b) pretty (c) docile (d) glum
6. loquacious
(a) sweet (b) beautiful (c) tall (d) talkative
7. hilarious
(a) lengthy (b) dull (c) boisterous (d) extemporaneous
8. smug
(a) self-satisfied (b) friendly (c) uncertain (d) unhappy
9. ludicrous
(a) detailed (b) absurd (c) lengthy (d) brilliant
10. rebuked
(a) promoted (b) scolded (c) praised (d) retarded

Note. The scale is from "PLAB: A Multiple-item Scale for Predicting Student Success in Foreign Language Learning," by P. Pimsleur, 1966, Second Language Testing, Inc. Copyright 1986 by Second Language Testing, Inc. Used with permission of Second Language Testing, Inc.

Part 5: Social Distance

Classroom Social Distance Scale

Directions: Please rate the social distance in your English language learning classes where

SA=Strongly Agree

A=Agree

N=Neither Agree nor Disagree

D=Disagree

SD=Strongly Disagree

Select one response for each question

	SA	A	N	D	SD
(1) I would like to have a foreigner (native speaker) as one of my best friends.					
(2) I would like to have a foreigner (native speaker) in my group but not as a close friend.					
(3) I would like to be with a foreigner (native speaker) once in awhile but not often or for long at a time.					
(4) I don't mind a foreigner (native speaker) being in our room, but I don't want to have anything to do with a foreigner (native speaker).					
(5) I wish the foreigner (native speaker) wasn't in our room.					

Note. The scale is from "Classroom Social Distance Scale for Assessing Learners Maintain Their Classroom Social Status," by L. W. Sherman, D.E. Burgess, 1985, *Perceptual and Motor Skills*, 61, pp. 1223-1233. Copyright 1985 by Perceptual and Motor Skills. Used with permission of the first author.

Part 6: Frequency of Participation in Cooperative Learning Scale

Directions: Please rate the frequency of participation in the following cooperative learning strategies in your English language learning classes where

- (1) Never
- (2) At least once a semester
- (3) At least once a month
- (4) At least once a week
- (5) Every class

Select one response for each question.

	(1) Never	(2) At least once a semester	(3) At least once a month	(4) At least once a week	(5) Every class
Restructuring —It requires students to interact physically as a group. Students are asked to come to the front of the room and line up according to a specific criterion, such as their date of birth.					
One-Centered —It would be a “spotlight interview,” which means all students are given a list of interview questions which can be asked. Several different students are “spotlighted” each day.					
Unified Group —It is the “strip story,” which means narrative stories with definite story lines. Students have to work together in the group to put the story back together; all information must be exchanged orally.					
Dyad —Each student will be given one of the grids, which contains only some information. The task is for students to share personal ideas and values, and to figure out strategies, and then acquire information to complete the grids.					
Small Group —It requires students to have patience, motivation, and good listening habits. This activity helps students develop techniques for whole group interaction.					

Note. The scale of responses categories is from "Frequency of Use of Instructor-centered Teaching Techniques for Assessing How Frequently Use Certain Teaching Techniques," by C. E. Brawner, R.M. Felder, 2001, Southeastern University and College Coalition for Engineering Education, pp. 19-39. Copyright 2001 by Catherine E. Brawner and Richard M. Felder. Used with permission of the first author.

Part 7: English Language Proficiency

Four (Listening, Speaking, Reading, Writing) Skills Assessment Scale

Directions: Please rate the four skills assessment in your English language learning classes where

- (1) Have not improved
- (2) Have improved a little
- (3) Have moderately improved
- (4) Have improved very much

Select one response for each question.

Self-Report Learning of the Four Language Skills

	(1) Have not improved	(2) Have improved a little	(3) Have moderately improved	(4) Have improved very much
I think my English listening skills				
I think my English speaking skills				
I think my English reading skills				
I think my English writing skills				

What is your most recent grade in your English class? _____

Note. The scale is from "Learning of the Four Language Skills," by R. Greenfield, 2003, Language Learning & Technology, 7 (1), pp. 46-70. Copyright 2003 by Language Learning & Technology. Used with permission of the first author.

Appendix J

Survey Invitation

Dear University Students:

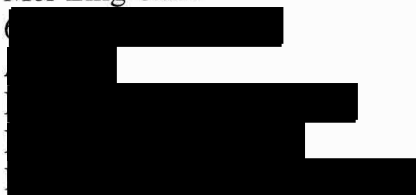
My name is Mei-Ling Chen. I am a current doctoral student at Lynn University. I am studying Global Leadership, with a specialization in Educational Leadership. I am conducting research on effectiveness of instructional strategies emphasizing cooperative learning in the acquisition of English by Taiwanese university students.

This e-mail invites you to participate in an online survey about cooperative learning in the acquisition of English. Please click the following link to enter a web page, which further describes the survey and provides information about your consent to participate. This is followed by a link to the online survey.

<http://www.surveymonkey.com/>

Thank you so much for your assistance with my dissertation.
Best Regards.

Mei-Ling Chen



APPENDIX K

Permission to Use the Figures of "What are the Differences" and "Cooperative Learning Classroom Arrangement"

From: David Johnson [REDACTED]
Sent: Wednesday, May 2, 2007 11:34 AM
To: Mei-Ling Chen [REDACTED]
Subject: Re: Requesting permission to use the figures of "What are the Differences" and "Cooperative Learning Classroom Arrangement"

Dear Mei-Ling Chen
You have my permission to do so.

David W. Johnson
Professor of Educational Psychology
University of Minnesota
60 Peik Hall
Minneapolis, MN 55455
[REDACTED]

----- Original Message -----

From: Mei-Ling Chen [REDACTED]
Sent: Wednesday, May 2, 2007 10:47 AM
To: D. W. Johnson [REDACTED]
Subject: Requesting permission to use the figures of "What are the Differences" and "Cooperative Learning Classroom Arrangement"

On May 2, 2007, at 9:47 AM, Mei-Ling Chen wrote:

Dear Dr. Johnson, Johnson and Holubec,

My name is Mei-Ling Chen. I am a doctoral student at Lynn University. I am conducting research on effectiveness of instructional strategies emphasizing cooperative learning in the acquisition of English by Taiwanese university students. I read your excellent books entitled "Circles of Learning: Cooperation in the Classroom (1993)" and "Leading the Cooperative School (1994)" has been very helpful to me and actually served as concept for my dissertation. At this point I am thinking of using your figures of "What are the Differences between cooperative learning groups and traditional learning groups" and "Cooperative Learning Classroom Arrangement" from that book to put as appendix. I would like to ask for your permission to use figure in my dissertation. Would you please forward your approval letter via this e-mail? Thank you so much for your assistance. I am looking forward to your reply.

Best Regards,

Mei-Ling Chen
Lynn University Ph.D. Student
Phone: [REDACTED]
[REDACTED]

APPENDIX L

Permission to Use the Attitude/Motivation Test Battery

From: R.C. Gardner [REDACTED]
Sent: Friday, August 4, 2006 02:40 PM
To: Mei-Ling Chen [REDACTED]
Subject: Re: Requesting permission to use the Motivational Intensity Scale

Dear Mei-Ling Chen

I'm sorry I missed your telephone call today, and I am glad you also emailed me. This is to let you know that you have my permission to use our Motivational Intensity scale for your research. I ask only that you cite the source in any article you write. You might also want to look at the following article for a different version of our scale. The reference is:

Gardner, R. C. , Tremblay, P. F. & Masgoret, A.-M. (1997) Towards a full model of second language learning: An empirical investigation. *Modern Language Journal* 81, 344-362.

There you will find the items for a ten item Motivational Intensity scale using a Likert format. We have used this version in much of our later research. Regardless of which version you use, I recommend to individuals that they adapt the items to make them relevant to their situation. Sometimes researchers use items that really aren't that meaningful to their students. I also recommend that they compute the Cronbach reliability coefficient for their data to ensure that the scale is consistent.

I realize that when planning research, one has to keep the number of items as few as possible. I would suggest, however, that you read two talks I gave that are reprinted on my webpage (see address in my signature file below). One talk was to the Eurosla conference and the other was to the Canadian Applied Linguistics Association. In both of these, I discuss the concept of motivation in some detail, and point out that motivation is quite complex, and is not measured by one scale like the Motivational Intensity scale. I do argue that a meaningful index of motivation can be obtained by a sum of scores on three of our scales, motivational intensity, desire to learn the language, and attitudes toward learning the language.

Good luck with your research.

R. C. Gardner

R. C. Gardner, Ph.D.
Professor Emeritus
Department of Psychology
University of Western Ontario
London, Ontario N6A 5C2
Office Phone: [REDACTED]
E-mail: [REDACTED]
Webpage <http://publish.uwo.ca/~gardner/>

----- Original Message -----

From: Mei-Ling Chen [REDACTED]

Sent: Thursday, August 3, 2006 11:23 AM

To: R.C. Gardner [REDACTED]

Subject: Requesting permission to use the Motivational Intensity Scale

Mei-Ling Chen wrote:

Dear Dr. Gardner:

My name is Mei-Ling Chen. I am a doctoral student at Lynn University. I am conducting research on effectiveness of instructional strategies emphasizing cooperative learning in second language acquisition in Taiwanese students. I read one of your excellent article entitled "The Attitude/Motivation Test Battery: Technical Report"(1985) has been very helpful to me and actually served as concept for my dissertation. At this point I am thinking of using your "Motivational Intensity Scale" items from that article to measure the motivational intensity of second language learners' to learn English. I would like to ask for your permission to use instrument in my dissertation. Would you please forward your approval letter via this e-mail? Thank you so much for your assistance. I am looking forward to your reply.

Best Regards,

Mei-Ling Chen

Lynn University Ph.D. Student

Phone: [REDACTED]
[REDACTED]

APPENDIX M

Permission to Use the Foreign Language Classroom Anxiety Scale (FLCAS)

From: Elaine K. Horwitz [REDACTED]
Sent: Wednesday, August 9, 2006 09:27 AM
To: Mei-Ling Chen [REDACTED]
Subject: Re: Requesting permission to use the Foreign Language Classroom Anxiety Scale (FLCAS)

Dear Mei-Ling Chen

I believe that you wrote before, and I did not reply because I was traveling. Please accept my apology.

Thank you for your interest in my work. Subject to the usual requirements for acknowledgment, I am pleased to grant you permission to use the Foreign Language Anxiety Scale in your research. Specifically, you must acknowledge my authorship of the FLCAS in any oral or written reports of your research. I also request that you inform me of your findings.

I am including the FLCAS and some information about it below. Best wishes on your project.

Sincerely,
Elaine K. Horwitz

Foreign Language Classroom Anxiety Scale (FLCAS)

The FLCAS has 33 questions which are scored on a 5-point scale ranging from 1 (strongly disagree) to 5 (strongly agree). This version uses the phrase "foreign language," but English or any other language can be substituted in the items.

The FLCAS can be tricky to score because some of the questions reflect anxiety and some of them reflect a lack of anxiety, but if you read each item carefully, you should not be confused. You should always score a "5" for the highest level of anxiety and a "1" for the least anxiety.

For example, for item 3 (I tremble when I know that I'm going to be called on in language class.) "5" (strongly agree) indicates a high level of anxiety while "1" (strongly disagree) indicates a low level of anxiety. Items 1, 3, 4, 6, 7, 9, 10, 12, 13, 15, 16, 17, 19, 20, 21, 23, 24, 25, 26, 27, 29, 30, 31, and 33 should be scored in this straightforward way. However some of the items like item 2 (I don't worry about making mistakes in language class.) reflect a lack of anxiety. For these items, a "5" (strongly agree) would indicate a low level of anxiety while a "1" (strongly disagree) would indicate a high level of anxiety.

Items 2, 5, 8, 11, 14, 18, 22, 28, and 32 are called reverse-scored items. For these items, you will need to switch your students' responses. "5's" should be "reverse-scored to "1's," "4's" to "2's," "1's" to "5's," and "2's to "4's." Of course, "3's" will not have to be switched. By paying attention to the regular and the reverse-scored items, higher total scores on the FLCAS will represent higher levels of anxiety.

To determine a student's anxiety level, add up their responses to all the questions, remembering to first reverse-score the items that need reverse-scoring, then divide the total by 33 (the total number of questions). Students with averages around 3 should be considered slightly anxious, while students with averages below 3 are probably not very anxious. Students who average near 4 and above are probably fairly anxious, and you should begin to work with them to find a way to reduce their anxiety.

Directions: For each item, indicate whether you (1) Strongly Disagree (2) Disagree (3) Neither Agree nor Disagree (4) Agree or (5) Strongly Agree.

1. I never feel quite sure of myself when I am speaking in my foreign language class.
2. I don't worry about making mistakes in language class.
3. I tremble when I know that I'm going to be called on in language class.
4. It frightens me when I don't understand what the teacher is saying in the foreign language.
5. It wouldn't bother me at all to take more foreign language classes.
6. During language class, I find myself thinking about things that have nothing to do with the course.
7. I keep thinking that the other students are better at languages than I am.
8. I am usually at ease during tests in my language class.
9. I start to panic when I have to speak without preparation in language class.
10. I worry about the consequences of failing my foreign language class.
11. I don't understand why some people get so upset over foreign language classes.
12. In language class, I can get so nervous I forget things I know.
13. It embarrasses me to volunteer answers in my language class.

14. I would not be nervous speaking the foreign language with native speakers.
15. I get upset when I don't understand what the teacher is correcting.
16. Even if I am well prepared for language class, I feel anxious about it.
17. I often feel like not going to my language class.
18. I feel confident when I speak in foreign language class.
19. I am afraid that my language teacher is ready to correct every mistake I make.
20. I can feel my heart pounding when I'm going to be called on in language class.
21. The more I study for a language test, the more confused I get.
22. I don't feel pressure to prepare very well for language class.
23. I always feel that the other students speak the foreign language better than I do.
24. I feel very self-conscious about speaking the foreign language in front of other students.
25. Language class moves so quickly I worry about getting left behind.
26. I feel more tense and nervous in my language class than in my other classes.
27. I get nervous and confused when I am speaking in my language class.
28. When I'm on my way to language class, I feel very sure and relaxed.
29. I get nervous when I don't understand every word the language teacher says.
30. I feel overwhelmed by the number of rules you have to learn to speak a foreign language.
31. I am afraid that the other students will laugh at me when I speak the foreign language.
32. I would probably feel comfortable around native speakers of the foreign language.
33. I get nervous when the language teacher asks questions I haven't prepared in advance.

----- Original Message -----

From: Mei-Ling Chen [REDACTED]

Sent: Thursday, August 3, 2006 01:30 PM

To: Elaine K. Horwitz [REDACTED]

Subject: Requesting permission to use the Foreign Language Classroom Anxiety Scale (FLCAS)

Quoting Mei-Ling Chen [REDACTED]:

Dear Dr. Horwitz, Horwitz & Cope:

My name is Mei-Ling Chen. I am a doctoral student at Lynn University. I am conducting research on effectiveness of instructional strategies emphasizing cooperative learning in second language acquisition in Taiwanese students. I read one of your excellent article entitled "Foreign Language Classroom Anxiety" (1986) has been very helpful to me and actually served as concept for my dissertation. At this point I am thinking of using your "The Foreign Language Classroom Anxiety Scale" items from that article to measure the levels of anxiety experienced by second language learners. I would like to ask for your permission to use instrument in my dissertation. Would you please forward your approval letter via this e-mail? Thank you so much for your assistance. I am looking forward to your reply.

Best Regards,

Mei-Ling Chen

Lynn University Ph.D. Student

Phone: [REDACTED]
[REDACTED]

APPENDIX N

Permission to Use the Pimsleur Language Aptitude Battery (PLAB)

From: Justin Kelly [REDACTED]
Sent: Thursday, August 10, 2006 01:56 PM
To: Mei-Ling Chen
Subject: R.e: Requesting permission to use the Pimsleur Language Aptitude Battery (PLAB)



Second Language Testing Foundation

Charles W. Stansfield, Ph.D., President

August 10, 2006

To Whom It May Concern:

Second Language Testing, Inc., publishers and copyright owners of the Pimsleur Language Aptitude Battery (PLAB), hereby authorizes Mei-Ling Chen to use the PLAB, including the statistical analyses contained in the test manual regarding validity and reliability of the test, in her dissertation research.

Sincerely,

[REDACTED]
Charles W. Stansfield, Ph.D.
President

----- Original Message -----

From: Mei-Ling Chen [REDACTED]
Sent: Thursday, August 3, 2006 12:08 PM
To: Justin Kelly [REDACTED]
Subject: Requesting permission to use the Pimsleur Language Aptitude Battery (PLAB)

Dear Justin:

My name is Mei-Ling Chen. I am a doctoral student at Lynn University (<http://www.lynn.edu/>). My doctoral chairman is professor William James Leary

[REDACTED], (EdD, Harvard University; EdD, Boston University). I am studying Global Leadership, with a specialization in Educational Leadership. I am conducting research on effectiveness of instructional strategies emphasizing cooperative learning in the acquisition of English by Taiwanese university students.

Statement of research or dissertation proposal, detailing your research design

The primary purpose of this study is to conduct research on the effectiveness of cooperative learning in second language acquisition. These data will serve as the basis to better explore the relationship between learner factors, second language acquisition, and the implementation of cooperative learning. More specifically, this dissertation proposal aims to examine cooperative learning skills in second language acquisition. In addition, this study leads to the assessment of second language proficiency skills of listening, speaking, reading, and especially writing as it pertains to the implementation of cooperative learning.

I talked to my chairman (William James Leary) that I need an entire test.

Thank you so much for your assistance.

I am looking forward to reply soon.

Best Regards,

Mei-Ling Chen

[REDACTED]

[REDACTED]

[REDACTED]

Phone:

[REDACTED]

E-mail:

[REDACTED]

APPENDIX O

Permission to Use the Classroom Social Distance Scale

From: Lawrence W. Sherman [REDACTED]
Sent: Friday, August 4, 2006 09:52 AM
To: Mei-Ling Chen [REDACTED]
Subject: Re: Requesting permission to use the Classroom Social Distance Scale

Dear Mei-Ling Chen

Many thanks for your interest in the "classroom social distance scale". You do have my permission to use it. Thanks for asking. I would be very interested in the results of your studies. When completed please forward a report. Best regards, Lawrence W. Sherman

Lawrence W. Sherman, Ph. D.
Professor, Department of Educational Psychology
School of Education and Allied Professions
Miami University
Oxford, Ohio 45056 USA
URL: <http://www.users.muohio.edu/shermalw>

----- Original Message -----

From: Mei-Ling Chen [REDACTED]
Sent: Wednesday, August 2, 2006 08:45 PM
To: Lawrence W. Sherman [REDACTED]
Subject: Requesting permission to use the Classroom Social Distance Scale

At 08:45 PM 8/2/2006, you wrote:

Dear Dr. Sherman & Dr. Burgess:

My name is Mei-Ling Chen. I am a doctoral student at Lynn University. I am conducting research on effectiveness of instructional strategies emphasizing cooperative learning in second language acquisition in Taiwanese students. I read one of your excellent article entitled "Sociometry in the Classroom: How to do it" (1985) has been very helpful to me and actually served as concept for my dissertation. At this point I am thinking of using your "The Classroom Social Distance Scale" items from that article to measure second language learners maintain their classroom social status. I would like to ask for your permission to use instrument in my dissertation. Would you please forward your approval letter via this e-mail? Thank you so much for your assistance. I am looking forward to your reply.

Best Regards,

Mei-Ling Chen
Lynn University Ph.D. Student
Phone: [REDACTED]
[REDACTED]

APPENDIX P

Permission to Use Responses Categories of Instructor-Centered Teaching Techniques

From: Richard M. Felder [REDACTED]
Sent: Friday, October 13, 2006 10:38 AM
To: Mei-Ling Chen [REDACTED]
Subject: Re: Requesting permission to use responses categories

Dear Mr. Chen,
You have my permission to use any material you wish from the 1999-2000
SUCCEED faculty survey.

Sincerely,
Richard M. Felder

Richard M. Felder
Hoechst Celanese Professor Emeritus
Department of Chemical and Biomolecular Engineering
North Carolina State University
Raleigh, NC 27695-7905
Office [REDACTED]
[REDACTED]

----- Original Message -----

From: Mei-Ling Chen [REDACTED]
Sent: Thursday, October 12, 2006 12:29 AM
To: Richard M. Felder [REDACTED]
Subject: Requesting permission to use responses categories

Dear Dr. Brawner& Felder:

My name is Mei-Ling Chen. I am a doctoral student at Lynn University. I am conducting research on effectiveness of instructional strategies emphasizing cooperative learning in the acquisition of English by Taiwanese university students. I read one of your excellent article entitled "1999-2000 Succeed faculty survey of teaching practices and perceptions of institutional attitudes toward teaching" (2001) has been very helpful to me and actually served as concept for my dissertation. At this point I am thinking of using your "responses categories" 【(1) never, (2) at least once a semester, (3) at least once a month, (4) at least once a week, and (5) every class】 from that article to measure second language learners. I would like to ask for your permission to use instrument in my dissertation. Would you please forward your approval letter via this e-mail? Thank you so much for your assistance. I am looking forward to your reply.

Best Regards,

Mei-Ling Chen
Lynn University Ph.D. Student
Phone: [REDACTED]
[REDACTED]

APPENDIX Q

Permission to Use the Four (Listening, Speaking, Reading, Writing) Skills

Assessment Scale

From: Roseanne Greenfield ([REDACTED])
Sent: Friday, August 11, 2006 4:42 PM
To: Mei-Ling Chen ([REDACTED])
Subject: Re: Requesting permission to use the Four (Listening, Speaking, Reading, Writing) Skills Assessment Scale

Dear Mei-Ling Chen,
Thank you for your kind explanation. I thought it had to do with my children's books instead, not doctoral dissertation--normally most of my email is about picture books.

Yes, I do give you permission to use "Collaborative E-mail Exchange for Teaching Secondary ESL: A Case Study in Hong Kong"(2003) in your research and work, as long as you are able to cite it in your bibliography.

I wish you the best of luck in your research and on the writing of your dissertation ahead. Hope it is not all 'uphill!'

Warm regards,
Dr. Roseanne Greenfield (Thong)
www.greenfield-thong.com

----- Original Message -----

From: Mei-Ling Chen ([REDACTED])
Sent: Thursdays, August 3, 2006 01:49 PM
To: Roseanne Greenfield (Thong) ([REDACTED])
Subject: Requesting permission to use the Four (Listening, Speaking, Reading, Writing) Skills Assessment Scale

Dear Dr. Greenfield:
My name is Mei-Ling Chen. I am a doctoral student at Lynn University. I am conducting research on effectiveness of instructional strategies emphasizing cooperative learning in second language acquisition in Taiwanese students. I read one of your excellent article entitled "Collaborative E-mail Exchange for Teaching Secondary ESL: A Case Study in Hong Kong"(2003) has been very helpful to me and actually served as concept for my dissertation. At this point I am thinking of using your "Learning the Four Language Skills Scale" items from that article to measure the four language skills by second language learners. I would like to ask for your permission to use instrument in my dissertation. Would you please forward your approval letter via this e-mail? Thank you so much for your assistance. I am looking forward to your reply.

Best Regards,

Mei-Ling Chen
Lynn University Ph.D. Student
Phone: [REDACTED]
[REDACTED]

138C10/9795
08/27/07 39800 MC SH Group